```
Welcome to DIALOG

Dialog level 05.10.03D

? b 411;set files biotech
     11apr06 08:07:52 User219511 Session D644.2
        $0.00   0.102 DialUnits File410
    $0.00  Estimated cost File410
    $0.02  TELNET
    $0.02  Estimated cost this search
    $0.43  Estimated total session cost   0.218 DialUnits
File 411:DIALINDEX(R)

DIALINDEX(R)
  (c) 2006 Dialog

*** DIALINDEX search results display in an abbreviated ***
*** format unless you enter the SET DETAIL ON command. ***
>>>        135 is unauthorized
>>>1 of the specified files is not available
   You have 24 files in your file list.
   (To see banners, use SHOW FILES command)
? s interleukin and delta

Your SELECT statement is:
  s interleukin and delta

        Items   File
        -----   ----
         2024     5: Biosis Previews(R)_1969-2006/Apr W1
            2     6: NTIS_1964-2006/Mar W4
           19     8: Ei Compendex(R)_1970-2006/Apr W1
         1007    24: CSA Life Sciences Abstracts_1966-2006/Feb
         3347    34: SciSearch(R) Cited Ref Sci_1990-2006/Mar W4
            6    65: Inside Conferences_1993-2006/Apr 10
          295    71: ELSEVIER BIOBASE_1994-2006/Apr W2
         1118    73: EMBASE_1974-2006/Apr 11
          127    94: JICST-EPlus_1985-2006/Jan W3
           25    98: General Sci Abs_1984-2004/Dec
            2   136: BioEngineering Abstracts_1966-2006/Feb
            1   143: Biol. & Agric. Index_1983-2006/Mar
          658   144: Pascal_1973-2006/Mar W3
         1923   155: MEDLINE(R)_1951-2006/Apr 11
            9   172: EMBASE Alert_2006/Apr 11
           38   266: FEDRIP_2005/Dec
            2   315: ChemEng & Biotec Abs_1970-2006/Mar
          142   357: Derwent Biotech Res.__1982-2006/Apr W1
            2   358: Current BioTech Abs_1983-2006/Jan
            2   369: New Scientist_1994-2006/Aug W4
           50   370: Science_1996-1999/Jul W3
         1402   399: CA SEARCH(R)_1967-2006/UD=14416
           43   434: SciSearch(R) Cited Ref Sci_1974-1989/Dec

  23 files have one or more items; file list includes 24 files.

? s interleukin (3W) delta

Your SELECT statement is:
  s interleukin (3W) delta

        Items   File
        -----   ----
           49     5: Biosis Previews(R)_1969-2006/Apr W1
            9    24: CSA Life Sciences Abstracts_1966-2006/Feb
           29    34: SciSearch(R) Cited Ref Sci_1990-2006/Mar W4
            3    71: ELSEVIER BIOBASE_1994-2006/Apr W2
            8    73: EMBASE_1974-2006/Apr 11
            8   144: Pascal_1973-2006/Mar W3
           16   155: MEDLINE(R)_1951-2006/Apr 11
           10   357: Derwent Biotech Res.__1982-2006/Apr W1
          132   399: CA SEARCH(R)_1967-2006/UD=14416

  9 files have one or more items; file list includes 24 files.

? save temp; b 155,5,34,71,73,357;exs;rd
Temp SearchSave "TD221611372" stored
     11apr06 08:09:20 User219511 Session D644.3
        $2.05   0.773 DialUnits File411
    $2.05  Estimated cost File411
    $0.53  TELNET
    $2.58  Estimated cost this search
    $3.01  Estimated total session cost   0.991 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1951-2006/Apr 11
       (c) format only 2006 Dialog
*File 155: Medline has been reloaded. Some accession numbers
have changed.
  File   5:Biosis Previews(R) 1969-2006/Apr W1
       (c) 2006 BIOSIS
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/Mar W4
       (c) 2006 Inst for Sci Info
  File  71:ELSEVIER BIOBASE 1994-2006/Apr W2
       (c) 2006  Elsevier Science B.V.
  File  73:EMBASE 1974-2006/Apr 11
       (c) 2006 Elsevier Science B.V.
  File 357:Derwent Biotech Res. _1982-2006/Apr W1
       (c) 2006 Thomson Derwent & ISI

     Set  Items  Description
     ---  -----  -----------
Executing TD221611372
HILIGHT set on as '%'
        722205  INTERLEUKIN
        472678  DELTA
     S1    115  INTERLEUKIN (3W) DELTA
     S2     88  RD  (unique items)
? t s2/7/1-88;bye

 2/7/1    (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15454452  PMID: 15880345
  Kappa and delta opioid receptors are expressed but down-regulated in
fibroblast-like synoviocytes of patients with rheumatoid arthritis and
osteoarthritis.
  Shen Hua; Aeschlimann Andre; Reisch Natasa; Gay Renate E; Simmen Beat R;
Michel Beat A; Gay Steffen; Sprott Haiko
  University Hospital Zurich, Zurich, Switzerland.
  Arthritis and rheumatism (United States)  May 2005,  52 (5) p1402-10,
ISSN 0004-3591--Print  Journal Code: 0370605
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  OBJECTIVE:  To investigate the expression and regulation of the
kappa-opioid receptor (KOR) and the delta-opioid receptor (DOR) in
fibroblast-like synoviocytes (FLS) from patients with osteoarthritis (OA)
and rheumatoid arthritis (RA), and to explore the potential antiarthritic
mechanisms of peripheral KORs. METHODS:  FLS isolated from synovial tissues
of 6 OA patients, 8 RA patients, and 2 healthy individuals were exposed to
the selective KOR agonist U69593, the selective DOR agonist SNC 80, and
kappa-opioid dynorphin A in the presence or absence of the KOR antagonist
nor-binaltorphimine, the DOR antagonist naltrindole, and the
proinflammatory cytokines tumor necrosis factor alpha (TNFalpha) and
interleukin-1beta (IL-1beta). The expression of KOR and DOR in OA and RA
FLS was evaluated on the messenger RNA (mRNA) and protein levels with
TaqMan real-time reverse transcriptase-polymerase chain reaction and
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immunofluorescence staining, respectively. KOR/DOR-mediated activation of ERK-1 and ERK-2 was investigated by Western blotting. RESULTS: We detected functional KOR and DOR in normal FLS and observed a reduction of both receptors in OA and RA FLS, which was more distinct in RA FLS. U69593 enhanced KOR mRNA expression in both OA and RA FLS in a KOR antagonist-reversible manner. However, the dose required for maximal enhancement in RA FLS was 10 times higher than that required in OA FLS. TNFalpha and IL-1beta both suppressed the expression of DOR and KOR mRNA in both OA and RA FLS. CONCLUSION: DOR and KOR are constitutively present in normal FLS and are suppressed under inflammatory conditions, such as RA and OA. Most interestingly, the KOR agonist U69593 may exert an antiarthritic effect via up-regulation of KOR in OA and RA FLS.

Record Date Created: 20050511

Record Date Completed: 20050629

2/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15364569 PMID: 15751073

Rosiglitazone induces interleukin-1 receptor antagonist in interleukin-1beta-stimulated rat synovial fibroblasts via a peroxisome proliferator-activated receptor beta/delta-dependent mechanism.

Moulin David; Bianchi Arnaud; Boyault Sandrine; Sebillaud Sylvie; Koufany Meriem; Francois Mathias; Netter Patrick; Jouzeau Jean-Yves; Terlain Bernard

UMR 7561-CNRS-Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, France.

Arthritis and rheumatism (United States) Mar 2005, 52 (3) p759-69, ISSN 0004-3591--Print Journal Code: 0370605

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

OBJECTIVE: To study the potency of 2 peroxisome proliferator-activated receptor gamma (PPARgamma) agonists, 15-deoxy-Delta(12,14)-prostaglandin J(2) (15-deoxy-PGJ(2)) and rosiglitazone, to modulate the expression of interleukin-1 receptor antagonist (IL-1Ra) in rat synovial fibroblasts. METHODS: Levels of messenger RNA for IL-1Ra and PPAR isotypes (alpha, beta/delta, gamma) were assessed by real-time polymerase chain reaction in rat synovial fibroblasts exposed to 10 ng/ml of IL-1beta. PPAR levels were assessed by Western blotting and secreted IL-1Ra levels by immunoassay. The potency of PPARgamma agonists and the PPARbeta/delta agonist GW-501516 on IL-1Ra levels was tested in the range of 1-10 microM and at 100 pM, respectively. The contribution of PPARgamma to the effects of rosiglitazone on IL-1Ra secretion was examined either by its overexpression or by inhibition using wild-type or dominant-negative constructs and the antagonist GW-9662 (10 microM), respectively. The dominant-negative strategy was also performed to investigate the possible contribution of PPARbeta/delta and NF-kappaB activation. RESULTS: IL-1beta-induced IL-1Ra production was increased by 10 microM rosiglitazone but was reduced dose-dependently by 15-deoxy-PGJ(2). Both agonists lowered IL-1beta secretion, but rosiglitazone alone reduced the imbalance of IL-1beta/IL-1Ra toward basal levels. Enhancement of IL-1beta-induced IL-1Ra production by rosiglitazone was not affected by PPARgamma overexpression or by its inhibition with dominant-negative PPARgamma or GW-9662. Inhibition of NF-kappaB was also ineffective against rosiglitazone but abolished the stimulating effect of IL-1beta on IL-1Ra. All PPAR isotypes were expressed constitutively in rat synoviocytes, but PPARgamma decreased dramatically upon IL-1beta exposure, whereas PPARbeta/delta remained stable. Dominant-negative PPARbeta/delta abolished the enhancement of IL-1Ra by rosiglitazone, whereas GW-501516 reproduced the effect of rosiglitazone on IL-1Ra secretion. CONCLUSION: Rosiglitazone stimulates IL-1Ra production by a PPARbeta/delta mechanism in activated rat synovial fibroblasts, further contributing to its potential antiarthritic properties and opening new perspectives for the modulation of inflammatory genes by specific PPAR agonists in articular cells.

Record Date Created: 20050310

Record Date Completed: 20050505

2/7/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15284564 PMID: 15516334

Epidermal peroxisome proliferator-activated receptor gamma as a target for ultraviolet B radiation.

Zhang Qiwei; Southall Michael D; Mezsick Steven M; Johnson Christopher; Murphy Robert C; Konger Raymond L; Travers Jeffrey B

Department of Dermatology, Indiana University School of Medicine, Indinapolis, Indiana 46202, USA.

Journal of biological chemistry (United States) Jan 7 2005, 280 (1) p73-9, ISSN 0021-9258--Print Journal Code: 2985121R

Contract/Grant No.: AR01993; AR; NIAMS; HL62996; HL; NHLBI

Publishing Model Print-Electronic

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Ultraviolet B radiation (UVB) is a pro-oxidative stressor with profound effects on skin in part through its ability to stimulate cytokine production. Peroxisome proliferator-activated receptor gamma (PPAR gamma) has been shown to regulate inflammatory processes and cytokine release in various cell types. Since the oxidized glycerophospholipid 1-hexadecyl-2-azelaoyl glycerophosphocholine (azPC) has been shown to be a potent PPAR gamma agonist, this study was designed to assess whether the PPAR gamma system is a target for UVB irradiation and involved in UVB-induced inflammation in epidermal cells. The present studies demonstrated the presence of PPAR gamma mRNA and functional protein in human keratinocytes and epithelial cell lines HaCaT, KB, and A431. The treatment of epidermal cells with the PPAR gamma-specific agonist ciglitazone or azPC augmented cyclooxygenase-2 expression and enzyme activity induced by phorbol 12-myristate-13-acetate or interleukin-1 beta. Lipid extracts from the cell homogenate of UVB-irradiated, but not control, cells contained a PPAR gamma-agonistic activity identified by reporter assay, and this activity up-regulated cyclooxygenase-2 expression induced by phorbol 12-myristate-13-acetate. Subjecting purified 1-hexadecyl-2-arachidonoyl-glycerophosphocholine to UVB irradiation generated a PPAR gamma-agonistic activity, among which the specific PPAR gamma agonist azPC was identified by mass spectrometry. These findings suggested that UVB-generated PPAR gamma-agonistic activity was due to the free radical omediated non-enzymatic cleavage of endogenous glycerophosphocholines. Treatment with the specific PPAR gamma antagonist GW9662 or expression of a dominant-negative PPAR gamma mutant in KB cells inhibited UVB-induced epidermal cell prostaglandin E(2) production. These findings suggested that UVB-generated PPAR gamma activity is necessary for the optimal production of epidermal prostaglandins. These studies demonstrated that epithelial cells contain a functional PPAR gamma system, and this system is a target for UVB through the production of novel oxidatively modified endogenous phospholipids.

Record Date Created: 20041231

Record Date Completed: 20050721

Date of Electronic Publication: 20041029

2/7/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

15187690 PMID: 15448191

Transcriptional regulation of the human mu-opioid receptor gene by interleukin-6.

Borner Christine; Kraus Jurgen; Schroder Helmut; Ammer Hermann; Hollt Volker

Department of Pharmacology and Toxicology, University of Magdeburg, Magdeburg, Germany.

Molecular pharmacology (United States) Dec 2004, 66 (6) p1719-26,

ISSN 0026-895X--Print Journal Code: 0035623
Publishing Model Print-Electronic
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Inflammatory pain is counteracted by a number of physiological processes. For example, opioid receptors, which are present on peripheral terminals of sensory neurons, are activated by endogenous opioids, which are released from immune cells migrating to the inflamed tissue. Earlier data demonstrated that interleukin-6 contributes to such inflammation-induced analgesia. In this report, we demonstrated that interleukin-6 strongly induces mu-opioid receptor mRNA in the human neuroblastoma cell line SH SY5Y, whereas delta-opioid receptor mRNA levels are not influenced. The mRNA increase in these cells is followed by an increase in mu-opioid receptor-specific binding. Using transcription factor decoy oligonucleotides, direct evidence was provided that the up-regulation of mu-opioid receptor mRNA in intact cells is dependent on the transcription factors signal transducers and activators of transcription 1 (STAT1) and STAT3, whereas other transcription factors, such as activator protein-1, nuclear factor (NF)-kappaB, or NF-interleukin-6 are not involved. STAT1 and STAT3 bound to a site located at nucleotide -1583 on the promoter of the human mu-opioid receptor gene, as shown by transient transfection experiments, electrophoretic mobility shift assays, and transcription factor decoy oligonucleotides. A mutation analysis of the 5'-TTCATGGAA-3' STAT1/3 element (palindrome underlined) was performed to determine nucleotide residues that are necessary for the binding of STAT1 and STAT3. It suggested that only the palindromic half sides and the two adjacent central nucleotides are required. Neither mutation of the nucleotides outside the palindrome nor mutation of the central nucleotide affected STAT1/3 binding.

Record Date Created: 20041124
Record Date Completed: 20050324
Date of Electronic Publication: 20040924

2/7/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

14005077 PMID: 12423677

Hematopoietic abnormalities in mice deficient in gp130-mediated STAT signaling.

Jenkins Brendan J; Quilici Cathy; Roberts Andrew W; Grail Dianne; Dunn Ashley R; Ernst Matthias

Ludwig Institute for Cancer Research, Molecular Biology Laboratory, Victoria, Australia. Brendan.Jenkins@ludwig.edu.au

Experimental hematology (Netherlands) Nov 2002, 30 (11) p1248-56, ISSN 0301-472X--Print Journal Code: 0402313
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

OBJECTIVE: Studies on mice lacking the common receptor subunit gp130 reveal that activation of gp130-dependent signaling pathways is essential for normal fetal and adult hematopoiesis. However, the extent to which hematopoiesis is dependent upon activation of a particular gp130 signaling pathway, namely STAT1/3 or SHP2/MAPK, is unknown. This study examined the specific contribution of gp130-mediated STAT1/3 signaling to the regulation of hematopoiesis. MATERIALS AND METHODS: Hematopoiesis was examined at various developmental stages in mice homozygous for a targeted carboxy-terminal truncation mutation in gp130 (gp130(delta)/(delta)) that deletes all STAT1/3 binding sites, thereby abolishing gp130-mediated STAT1/3 activation. RESULTS: Adult gp130(delta)/(delta) mice have increased numbers of immature colony-forming unit spleen progenitor cells in the bone marrow and spleen, elevated numbers of committed myeloid progenitor cells in the spleen and peripheral blood, and leukocytosis. Increased progenitor cell production was observed in gp130(delta)/(delta) fetal livers from 14 days of gestation onward. In contrast, the circulating platelet count was reduced by 30% in gp130(delta)/(delta) mice, without any corresponding decrease in the number of bone marrow and splenic megakaryocytes. In liquid cultures, megakaryocytes from gp130(delta)/(delta) mice are smaller than those from wild-type mice and do not increase in size upon stimulation with interleukin-6 or interleukin-11. Administration of either interleukin-6 or %interleukin%-11 to gp130(%delta%)/(delta) mice failed to increase platelet numbers, despite an increase in the production of megakaryocytes. CONCLUSIONS: Collectively, these results reveal that gp130-mediated STAT1/3 activation is required to maintain the normal balance of hematopoietic progenitors during fetal and adult hematopoiesis. Furthermore, they suggest two distinct roles for gp130-mediated STAT1/3 activation in hematopoiesis, one restricting the production of immature hematopoietic progenitor cells and the other promoting the functional maturation of megakaryocytes to produce platelets.

Record Date Created: 20021108
Record Date Completed: 20021212

2/7/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

13312162 PMID: 11466363

Two novel IL-1 family members, IL-1 delta and IL-1 epsilon, function as an antagonist and agonist of NF-kappa B activation through the orphan IL-1 receptor-related protein 2.

Debets R; Timans J C; Homey B; Zurawski S; Sana T R; Lo S; Wagner J; Edwards G; Clifford T; Menon S; Bazan J F; Kastelein R A

DNAX Research Institute of Molecular and Cellular Biology, 901 California Avenue, Palo Alto, CA 94304, USA.

Journal of immunology (Baltimore, Md. - 1950) (United States) Aug 1 2001, 167 (3) p1440-6, ISSN 0022-1767--Print Journal Code: 2985117R
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

IL-1 is of utmost importance in the host response to immunological challenges. We identified and functionally characterized two novel IL-1 ligands termed IL-1delta and IL-1epsilon. Northern blot analyses show that these IL-1s are highly abundant in embryonic tissue and tissues containing epithelial cells (i.e., skin, lung, and stomach). In extension, quantitative real-time PCR revealed that of human skin-derived cells, only keratinocytes but not fibroblasts, endothelial cells, or melanocytes express IL-1delta and epsilon. Levels of keratinocyte IL-1delta are approximately 10-fold higher than those of IL-1epsilon. In vitro stimulation of keratinocytes with IL-1beta/TNF-alpha significantly up-regulates the expression of IL-1epsilon mRNA, and to a lesser extent of IL-1delta mRNA. In NF-kappaB-luciferase reporter assays, we demonstrated that IL-1delta and epsilon proteins do not initiate a functional response via classical IL-1R pairs, which confer responsiveness to IL-1alpha and beta or IL-18. However, IL-1epsilon activates NF-kappaB through the orphan IL-1R-related protein 2 (IL-1Rrp2), whereas IL-1delta, which shows striking homology to IL-1 receptor antagonist, specifically and potently inhibits this IL-1epsilon response. In lesional psoriasis skin, characterized by chronic cutaneous inflammation, the mRNA expression of both IL-1 ligands as well as IL-1Rrp2 are increased relative to normal healthy skin. In total, IL-1delta and epsilon and IL-1Rrp2 may constitute an independent signaling system, analogous to IL-1alphabeta/receptor agonist and IL-1R1, that is present in epithelial barriers of our body and takes part in local inflammatory responses.

Record Date Created: 20010723
Record Date Completed: 20011025

2/7/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

13131878 PMID: 11209092

dlk inhibits stem cell factor-induced colony formation of murine hematopoietic progenitors: Hes-1-independent effect.
Ohno N; Izawa A; Hattori M; Kageyama R; Sudo T
Pharmaceutical Research Laboratories, Toray Industries, Inc., Tebiro, Kamakura, Japan.
Stem cells (Dayton, Ohio) (United States) 2001, 19 (1) p71-9, ISSN 1066-5099--Print Journal Code: 9304532
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Delta-like (dlk) is a family of transmembrane proteins containing epidermal growth factor-like repeat motifs homologous to the notch/delta/serrate family. Recent studies suggest that dlk is a negative regulator of adipocyte differentiation, a promoting factor of cobblestone area colony formation, and a molecule which influences stromal cell-pre-B cell interactions and augments cellularity of developing thymocytes. However, the role of dlk in regulating the growth and differentiation of hematopoietic progenitors remains unclear. In the present study, we examined the effect of dlk on the proliferation of murine hematopoietic progenitors by hematopoietic growth factors. Soluble dlk-IgG Fc chimeric protein completely inhibited the colony formation of lineage-marker negative (Lin-) bone marrow cells by GM-CSF, G-CSF, or macrophage-CSF (M-CSF) in the presence of stem cell factor (SCF). However, dlk failed to inhibit the colony formation of Lin- bone marrow cells by CSF, as described above, or M-CSF plus interleukin 3. Furthermore, dlk failed to inhibit the colony formation of Hes-1-null fetal liver cells by M-CSF in the presence of SCF. These findings suggest that dlk is an important regulator of hematopoietic progenitor proliferation. Depending on the presence of SCF, dlk may act as a growth inhibitor, although dlk signaling does not mediate Hes-1 transcription factor.
Record Date Created: 20010314
Record Date Completed: 20010524

2/7/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

11635506 PMID: 9596941
[Establishment of a novel culture system for specific expansion of human gamma delta T cell and study of its biological properties]
Li X; Zhang X; Zhang Y
Immunology Research Unit, Suzhou Medical College.
Zhonghua yi xue za zhi (CHINA) Feb 1997, 77 (2) p111-4, ISSN 0376-2491--Print Journal Code: 7511141
Publishing Model Print
Document type: Journal Article ; English Abstract
Languages: CHINESE
Main Citation Owner: NLM
Record type: MEDLINE; Completed
OBJECTIVE: To study the specific expansion method of human gamma delta T cell and the molecular mechanism against tumor cells. METHODS: The peripheral blood mononuclear cells were co-cultured with XG-7 cells as stimulating cells and activated for the expansion of gamma delta T cells. Immunophonotype was analysed by IIFA and FACS. The cytotoxicity of gamma delta T cell against tumor cells was measured by 51Cr four hour release assay. RESULTS: When this novel culture system was used, gamma delta T cells mainly expressing V gamma 9/V delta 2 encoded TCR were selected and expanded rapidly from 4.8 +/- 3.4% to 46.2 +/- 8.3%. With exogenous %interleukin%-2, gamma %delta% T cells were expanded in large quantity 10(10) within 3 weeks. gamma delta T cells mediated strong cytotoxic activity to different tumor cells including K562, Daudi, XG-7 cell lines, but no cytotoxic activity to normal cells was observed. XG-7 cells expressed HSP molecules and anti-HSP in mAB blocked the proliferation of gamma delta T cells. CONCLUSION: The method shows unique biological properties: brief, rapid, well-repeating and wide cytotoxic activity against tumor cells. So gamma delta T cells are of value in tumor adoptive immunotherapy.
Record Date Created: 19980701
Record Date Completed: 19980701

2/7/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

10654335 PMID: 7581842
Detection of traces of a trisulphide derivative in the preparation of a recombinant truncated interleukin-6 mutein.
Breton J; Avanzi N; Valsasina B; Sgarella L; La Fiura A; Breme U; Orsini G; Wenisch E; Righetti P G
Pharmacia Farmitalia, BioScience Center, Nerviano, Italy.
Journal of chromatography. A (NETHERLANDS) Aug 11 1995, 709 (1) p135-46, ISSN 0021-9673--Print Journal Code: 9318488
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
A new mutein of %interleukin%-6, called %delta% 22-IL-6 Cys 3,4, characterized by the deletion of the first 22 amino acids at the N-terminal end and by the substitution of the first two cysteines (Cys23 and Cys29) with serine residues, was produced in Escherichia coli and was found to maintain the structural and functional properties of the human native form. A partially purified preparation still showed in isoelectric focusing a minor acidic component (pI 6.10) and a more basic component (pI 6.70), the native form having a pI of 6.56. This preparation was further fractionated in a multi-compartment electrolyser with isoelectric membranes, which allowed the collection of the more alkaline species for characterization. Mass spectra of the pI 6.70 form gave an additional mass of 32 atomic mass units (amu), suggesting the addition of two oxygen atoms (a potential oxidation of two methionine residues to sulphoxide). However, the five methionine residues in this higher pI form were identified after enzymatic hydrolysis and peptide mapping and were found to be in a reduced state. In addition, the pI 6.70 form was quickly converted into the native form by mild reductive treatment. On digestion and fingerprinting, the peptide from residues 50 to 65 of the pI 6.70 species (containing the only two cysteine residues of the molecule) exhibited a more hydrophobic behaviour in reversed-phase high-performance liquid chromatography and retained a mass increase of 32 amu. These experimental findings more likely suggest the addition of an extra sulphur atom to the only disulphide bridge to give an unusual protein trisulphide molecule.
Record Date Created: 19951205
Record Date Completed: 19951205

2/7/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

10643222 PMID: 7588776
DNA binding through distinct domains of zinc-finger-homeodomain protein AREB6 has different effects on gene transcription.
Ikeda K; Kawakami K
Department of Biology, Jichi Medical School, Tochigi, Japan.
European journal of biochemistry / FEBS (GERMANY) Oct 1 1995, 233 (1) p73-82, ISSN 0014-2956--Print Journal Code: 0107600
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Transcription factor AREB6 has a unique structure composed of two zinc-finger clusters in N- and C-terminal regions, and one homeodomain in the middle. AREB6 has been known to regulate the expression of the Na, K-ATPase alpha 1 subunit, %interleukin% 2 and %delta%-crystallin genes. We determined the optimal binding sites for the N-terminal zinc-finger cluster as GTCACCTGT or TGCACCTGT and for the C-terminal zinc-finger cluster as

C/TACCTG/TT by the CASTing method (cyclic amplification and selection of targets). The additional consensus sequence GTTTC/G, in conjunction with the CACCTGT sequence, was selected by the second CASTing for the entire coding region. The N-terminal zinc-finger cluster binds to DNA strongly when the DNA has GTTTC/G in conjunction with the CACCTGT sequence. The homeodomain had no specific DNA binding activity but was found to interact with the N-terminal zinc-finger cluster. Analyses of zinc-finger mutation proteins revealed that the contribution to DNA binding of each N-terminal zinc-finger motif is altered depending on the presence of the additional consensus. Transient transfection assays showed that AREB6 repressed the human 70-kDa heat-shock gene promoter harboring the CACCTGT sequence together with the additional consensus, and that AREB6 activated the promoter harboring the CACCTGT sequence without the additional consensus. These results suggest that AREB6 has multiple conformational states, leading to positive and negative regulations of gene transcription.
Record Date Created: 19951214
Record Date Completed: 19951214

2/7/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

10031034 PMID: 8168140
%Interleukin%-10 enhances gamma %delta% T cell development in the murine fetal thymus.
Fine J S; Macosko H D; Grace M J; Narula S K
Department of Immunology, Schering-Plough Research Institute, Kenilworth, New Jersey 07033.
Cellular immunology (UNITED STATES) Apr 15 1994, 155 (1) p111-22, ISSN 0008-8749--Print Journal Code: 1246405
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
We have investigated the ability of interleukin-10 (IL-10) to modulate murine intrathymic T cell differentiation using a fetal thymic organ culture (FTOC) model. Addition of as little as 11 ng of recombinant murine IL-10 (mIL-10) per day produced a significant increase in the proportion and number of gamma delta-TCR+ cells in 4-day cultures derived from Gestational Day 14 mice, compared to vehicle-treated cultures. This effect occurred in the absence of any changes in other parameters of intrathymic T cell development. The increase in the gamma delta-TCR population included an enlargement of the V gamma 2+, V gamma 3+, and V delta 4+ populations. The enhancement of gamma delta cell development was not observed in 2- or 7-day cultures, indicating the time dependence of this response. Overall, these results reveal that IL-10 treatment of FTOC can affect murine gamma delta T cell development and suggest that this cytokine may mediate specific events in the generation of the gamma delta T cell repertoire.
Record Date Created: 19940602
Record Date Completed: 19940602

2/7/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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09977241 PMID: 8296165
Differential effects of IL-10 on proliferation and cytokine production of human gamma/delta and alpha/beta T cells.
Schlaak J F; Hermann E; Gallati H; Meyer zum Buschenfelde K H; Fleischer B
First Department of Medicine, University of Mainz, Germany.
Scandinavian journal of immunology (ENGLAND) Feb 1994, 39 (2) p209-15, ISSN 0300-9475--Print Journal Code: 0323767
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Gamma/delta TCR bearing T lymphocytes represent a T-cell subset whose functional relevance remains unclear. Nevertheless these T cells may play a role in the early immune response against bacteria. Until now the regulatory mechanisms on this response have not been investigated. The study described here evaluated the immunoregulatory effects of %Interleukin%-10 on gamma/%delta% and alpha/beta TCR-positive T-cell clones and freshly isolated peripheral-blood mononuclear cells (PBMC). IL-10 has been shown previously to inhibit lectin and antigen-induced proliferation and cytokine production by alpha/beta T cells. The results outlined below show that rhIL-10 strongly inhibits lectin-induced production of IFN-gamma, TNF-alpha, IL-2, and to a lesser degree proliferation and IL-4 production of both T-cell subsets. As IL-10 did not inhibit proliferation but at the same time strongly suppressed cytokine production in various experiments, the hypothesis that it could function as a growth factor for human T cells as has been described for murine thymocytes was tested. The data demonstrate that, although the gamma/delta T-cell clones tested do not produce IL-10 they can use it as a growth factor in combination with IL-2, IL-4 or alone. Furthermore, IL-10 has the same properties on human alpha/beta T-cell clones and PBMC. In summary, it is shown that IL-10 has pleiotropic effects on gamma/delta and alpha/beta TCR+ T cells by inhibiting lectin-induced cytokine production and by acting as a growth factor for these cells alone or in combination with IL-2 or IL-4.
Record Date Created: 19940303
Record Date Completed: 19940303

2/7/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

09387226 PMID: 1329110
Modulation of %interleukin% 2 activity by %delta% 9-tetrahydrocannabinol after stimulation with concanavalin A, phytohemagglutinin, or anti-CD3 antibody.
Nakano Y; Pross S H; Friedman H
Department of Medical Microbiology and Immunology, University of South Florida College of Medicine, Tampa 33612.
Proceedings of the Society for Experimental Biology and Medicine. Society for Experimental Biology and Medicine (New York, N. Y.) (UNITED STATES) Nov 1992, 201 (2) p165-8, ISSN 0037-9727--Print Journal Code: 7505892
Contract/Grant No.: DA06385; DA; NIDA
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The effects of delta 9-tetrahydrocannabinol (THC) on lymphocyte proliferation and interleukin (IL) 2 activity was investigated using adult murine spleen cells stimulated with either the mitogens concanavalin A, phytohemagglutinin, or anti-CD3 antibody. THC was found to suppress mitogen-induced proliferation, but to enhance anti-CD3-antibody-induced proliferation. These results reflected THC-induced suppression of Ly2 cells following concanavalin A or phytohemagglutinin stimulation and THC-induced enhancement of Ly2 cells following CD3 stimulation. The combination of THC and concanavalin A or phytohemagglutinin resulted in suppressed IL-2 activity, whereas the combination of THC and anti-CD3 antibody resulted in enhanced IL-2 activity. This drug-related modulation of IL-2 activity corresponded to the changes in blastogenic activity as well as to variations in numbers of Tac positive cells. These results suggest that the dysregulation in immune responses following THC treatment, either suppression or enhancement, may relate to the effects of THC on IL-2 production.
Record Date Created: 19921119
Record Date Completed: 19921119

2/7/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

08140812 PMID: 2527156
Morphologic and functional characterization of human peripheral blood T cells expressing the T cell receptor gamma/delta.
Ferrini S; Zarcone D; Viale M; Cerruti G; Millo R; Moretta A; Grossi C E
Istituto Nazionale per la Ricerca sul Cancro, Universita di Genova, Italy.
European journal of immunology (GERMANY, WEST) Jul 1989, 19 (7) p1183-8, ISSN 0014-2980--Print Journal Code: 1273201
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The morphologic and functional characteristics of cells freshly isolated from human peripheral blood and bearing a T cell receptor (TcR) gamma/delta were analyzed. Cell preparations highly enriched for TcR gamma/delta+ cells were obtained by treatment of E rosette-forming lymphocytes with anti-CD4 and anti-CD8 monoclonal antibodies (mAb) and complement. These preparations consisted of 64-82% TcR gamma/delta+ lymphocytes, as indicated by the sum of cells reacting with the BB3 and A13 mAb which define two distinct, nonoverlapping, TcR gamma/delta+ cell subsets in the peripheral blood. TcR gamma/delta cells were able to form conjugates with the natural killer-sensitive K-562 and with the natural killer-resistant HL-60-R tumor cell lines. The cytochemical localization of lysosomal acid hydrolases showed that 95%-98% of the cells in the TcR gamma/delta+ preparations had the morphologic features of granular lymphocytes. Moreover, electron microscopy analyses showed that TcR gamma/delta+ cells had electron-dense granules dispersed in the cytoplasm and a variety of smooth vesicles, a morphology identical to that of other CD3- or CD3+ granular lymphocyte subsets. Freshly isolated TcR gamma/delta+ cells were unable to lyse K-562 and natural killer-resistant targets, such as HL-60-R and P815. However, low levels of target cell lysis were observed upon triggering of the effectors by anti-CD3 TcR mAb or by lectin. After short-term culture with %interleukin% 2, TcR gamma/%delta% + cells acquired a strong cytolytic activity against K-562 and HL-60-R target cells in the absence of triggering stimuli, and also displayed high levels of cytolytic activity against P815 in the presence of anti-CD3/TcR mAb.
Record Date Created: 19890912
Record Date Completed: 19890912

2/7/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

08039844 PMID: 2540100
Prevention and reversal of delta-9-tetrahydrocannabinol induced depression of natural killer cell activity by interleukin-2.
Specter S; Rivenbark M; Newton C; Kawakami Y; Lancz G
Department of Medical Microbiology and Immunology, University of South Florida College of Medicine, Tampa 33612.
International journal of immunopharmacology (ENGLAND) 1989, 11 (1) p63-9, ISSN 0192-0561--Print Journal Code: 7904799
Contract/Grant No.: DA 04141; DA; NIDA
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The effects of delta-9-tetrahydrocannabinol (THC) on NK cell activity were studied. Previously, we reported that incubation of human peripheral blood mononuclear cells in THC resulted in an inhibition of natural killer (NK) cell activity. The present study examined the mechanism(s) of the decrease in NK cell activity. The inhibition of killing by NK cells was not due to a failure of NK cells to bind to K562 target cells. Furthermore, indomethacin did not abrogate the THC-mediated effect, suggesting that prostaglandins are not involved in the process leading to suppression of NK cell activity. However, NK activity was partially restored if cells, pretreated with THC, were washed to remove excess drug and then incubated overnight in fresh medium before assay. Addition of 1-100 U IL-2, either during pretreatment with THC or during overnight incubation, precluded or promoted the reversal of the inhibition of NK cell cytotoxicity. We conclude that the regulatory mechanism(s) involved in depression of NK cell cytotoxicity by THC is significantly influenced by IL-2.
Record Date Created: 19890526
Record Date Completed: 19890526

2/7/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

07897958 PMID: 2975598
Structural and serological heterogeneity of gamma/delta T cell antigen receptor expression in thymus and peripheral blood.
Lanier L L; Ruitenberg J; Bolhuis R L; Borst J; Phillips J H; Testi R
Becton Dickinson Monoclonal Center, Inc., Moutain View, CA 94043.
European journal of immunology (GERMANY, WEST) Dec 1988, 18 (12) p1985-92, ISSN 0014-2980--Print Journal Code: 1273201
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Monoclonal antibodies (mAb) reactive against the gamma/delta T cell antigen receptor (TcR) have been used to characterize the distribution and structural properties of gamma/delta TcR-bearing lymphocytes in blood and thymus. Consistent with prior reports the TcR gamma/delta-1 and delta-1 mAb react with all gamma/delta TcR+ T lymphocytes in blood and thymus. By contrast the TCS-delta mAb was found only to react with a subset of the gamma/delta TcR-bearing T cell population. Several lines of evidence suggest that this reagent preferentially reacts with the V delta 1 gene product. Using these reagents, it was observed that gamma/delta TcR+ T lymphocytes comprise 4.6 +/- 3.5% (range 1.0-16.3%) of peripheral blood lymphocytes. However, analysis of peripheral blood from normal adult donors revealed that in 29 of 32 the TCS-delta (possibly V delta 1)-bearing cells comprised less than 30% of the total gamma/delta-TcR+ population. Biochemical analysis demonstrated that the predominant form of the gamma/delta TcR in adult peripheral blood is a disulfide-linked heterodimer, indicating preferential use of the C gamma 1 gene. The delta TcR chain from these TcR-gamma/delta-1+/TCS-delta- T cells was remarkably basic in charge, as analyzed by nonequilibrium pH gradient electrophoresis. By contrast with peripheral blood the majority of freshly isolated and %interleukin% 2-cultured gamma/%delta% TcR+ thymocytes were predominantly TcR-gamma/delta-1+/TCS-delta +, and preferentially expressed V delta 1. Moreover, both disulfide-bonded and nondisulfide-bonded gamma/delta TcR heterodimers were expressed in all thymuses examined and both forms were contained within the TCS-delta + thymic subset. Similar to recent findings in the mouse, these studies suggest a possible bias in the structural form of gamma/delta TcR based on tissue location.
Record Date Created: 19890314
Record Date Completed: 19890314

2/7/17 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0015697650 BIOSIS NO.: 200600043045
Expression of a novel cytokine, IL-4deltaf in HIV and HIV-tuberculosis co-infection
AUTHOR: Dheda Keertan; Chang Jung-Su; Breen Ronan A M; Haddock Jamanda A; Lipman Marc C; Kim Louise U; Huggett Jim F; Johnson Margaret A; Rook Graham A W (Reprint); Zumla Alimuddin
AUTHOR ADDRESS: Royal Free Univ Coll London, Sch Med, Ctr Infect Dis and Int Hlth, London W1T 4JF, UK**UK
AUTHOR E-MAIL ADDRESS: g.rook@ucl.ac.uk
JOURNAL: AIDS (Hagerstown) 19 (15): p1601-1606 OCT 14 2005 2005
ISSN: 0269-9370

DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Background: Correcting the Th2 shift in HIV/AIDS represents a potential intervention strategy. However data on interleukin (IL)-4 expression in HIV or AIDS are uninterpretable because of failure to distinguish between IL-4 and its splice variant and natural antagonist, IL-4 delta 2.Objective: To determine Th1 [interferon (IFN)-gamma], IL-4 delta 2 and Th2 (IL-4) expression in whole blood and lung lavage from healthy volunteers and in HIV or HIV-tuberculosis (TB) co-infection.Design: Cross-sectional with prospective cohort.Methods: Expression of IL-4 delta 2, IL-4 and IFN-gamma were determined by quantitative real-time PCR, using unstimulated cells from whole blood and lung lavage, in 20 HIV-TB (pulmonary) co-infected patients, 20 matched HIV-positive controls and 20 HIV-negative healthy volunteers. Results were correlated with plasma viral load, CD4 cell counts, radiological scores and response to anti-TB treatment.Results: Compared to HIV negative donors, stable HIV-positive donors did not have increased levels of mRNA encoding IL-4, IL-4 delta 2 or IFN-gamma in blood or lavage. By contrast, the HIV-TB co-infected donors had increased IL-4 and IFN-gamma in both compartments. However the antagonist, IL-4 delta 2 was increased only in lavage. Consequently the dominant form was IL-4 delta 2 in lavage, but IL-4 itself in blood. The lung IL-4/IFN-gamma ratio correlated with radiological disease extent. With anti-TB treatment, IL-4 levels did not change whilst IL-4 delta 2 levels increased significantly.Conclusions: IL-4 and its natural antagonist, IL-4 delta 2 and are not upregulated in the absence of opportunistic infection. However in HIV-TB co-infection both cytokines increase in lung, but only IL-4 in the periphery. Further studies are required to determine if IL-4 facilitates systemic HIV progression. (c) 2005 Lippincott Williams & Wilkins

2/7/18 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0015538194 BIOSIS NO.: 200510232694
In vivo and in vitro studies of a novel cytokine, %interleukin% 4 %delta% 2, in pulmonary tuberculosis
AUTHOR: Dheda Keertan; Chang Jung-Su; Breen A M; Kim Louise U; Haddock Jamanda A; Huggett Jim F; Johnson Margaret A; Rook Graham A W (Reprint); Zumla Alimuddin
AUTHOR ADDRESS: Royal Free Univ Coll, Sch Med, Ctr Infect Dis and Int Hlth, 46 Cleveland St, London W1T 4JF, UK**UK
AUTHOR E-MAIL ADDRESS: g.rook@ucl.ac.uk
JOURNAL: American Journal of Respiratory and Critical Care Medicine 172 (4): p501-508 AUG 15 2005 2005
ISSN: 1073-449X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Rationale: Tuberculosis progresses despite potent Th1 responses. A putative explanation is the simultaneous presence of a subversive Th2 response. However, interpretation is confounded by %interleukin% 482 (IL-4 %delta% 2), a splice variant and inhibitor of IL-4. Objective:To study levels of mRNA encoding IL-4 and IL-482, and their relationship to treatment and clinical parameters, in cells from lung lavage and blood from patients with pulmonary tuberculosis. Methods: IL-482, IFN-gamma, IL-4, and soluble CD30 (sCD30) levels were measured by polymerase chain reaction and relevant immunoassays in 29 patients and matched control subjects lacking responses to tuberculosis-specific antigens. Results: mRNA levels for IL-4 and IL-482 were elevated in unstimulated cells from blood and lung lavage of patients versus control subjects ($p < 0.005$). In control subjects, there were low basal levels of IL-4 and IL-482 mRNA expressed mainly by non-T cells ($p < 0.05$). However, in patients, there were greater levels of mRNA for both cytokines in both T- and non-T-cell populations ($p < 0.05$ compared with control subjects). Radiologic disease correlated with the IL-4/IFN-gamma ratio and sCD30 ($p < 0.005$). After chemotherapy, IL-4 mRNA levels remained unchanged, whereas IL-482 increased in parallel with IFN-gamma ($p < 0.05$). Sonicates of Mycobacterium tuberculosis upregulated expression of IL-4 relative to IL-482 in mononuclear cell cultures from patients ($p < 0.05$). Conclusions: A Th2-like response, prominent in T cells and driven by tuberculosis antigen, is present in tuberculosis and modulated by treatment, suggesting a role for IL-4 and IL-482 in the pathogenesis of tuberculosis and their ratio as a possible marker of disease activity. The specific antigens inducing the IL-4 response require identification to facilitate future vaccine development strategies.

2/7/19 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0015405975 BIOSIS NO.: 200510100475
Interleukin-4 production by human alveolar macrophages
AUTHOR: Pouliot P; Turmel V; Gelinas E; Laviolette M; Bissonnette E Y (Reprint)
AUTHOR ADDRESS: Hop Laval, 2725 Chemin Ste Foy, St Foy, PQ G1V 4G5, Canada **Canada
AUTHOR E-MAIL ADDRESS: elyse.bissonnette@med.ulaval.ca
JOURNAL: Clinical and Experimental Allergy 35 (6): p804-810 JUN 05 2005
ISSN: 0954-7894
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: IL-4 is a key factor for T helper type 2 (Th2) differentiation and Ig class switching to IgE and IgG(4) during the development of immune responses. IL-4 is produced by T cells, mast cells, basophils, and eosinophils. However, there is also evidence suggesting that rat alveolar macrophages (AMs) produce IL-4.Given the importance of AMs and Th2-related diseases in the lung, we investigated the production of IL-4 by human AMs.Human AMs were isolated from bronchoalveolar lavage, purified, and IL-4 production was investigated at mRNA and protein levels using real-time PCR, flow cytometry, immunocytochemistry, and ELISA. The presence of IL-4 was investigated in subjects with asthma or asymptomatic airway hyper-responsiveness, and in normal non-smokers.IL-4 and IL-4 delta 2 (a splice variant found in other IL-4 producing cells) mRNAs were found in all these subjects, but IL-4 expression could not be correlated with a particular disease. Protein production was verified by immunocytochemistry and flow cytometry analysis demonstrating, respectively, up to 69% and 59% positive AMs, regardless of the subject condition. Furthermore, phorbol-12-myristate-13-acetate and calcium ionophore stimulated the release of IL-4 after 48 h treatment in the presence of anti-IL-4 receptor antibody.Our results show for the first time that IL-4 and IL-4 delta 2 mRNA are expressed and IL-4 protein produced and released by human AMs, suggesting a contribution of these cells in the modulation of Th2 immune response.

2/7/20 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0015008559 BIOSIS NO.: 200400379348
Increased expression of mRNA encoding interleukin (IL)-4 and its splice variant IL-4delta2 in cells from contacts of Mycobacterium tuberculosis, in the absence of in vitro stimulation
AUTHOR: Fletcher Helen A; Owiafe Patrick; Jeffries David; Hill Philip; Rook Graham A W (Reprint); Zumla Alimuddin; Doherty T Mark; Brookes Roger H
AUTHOR ADDRESS: Sch MedWindeyer Inst Med SciCtr Infect Dis and Int Hlth, Royal Free and Univ Coll, Cleveland St, London, W1P 6DB, England**England
AUTHOR E-MAIL ADDRESS: g.rook@ucl.ac.uk
JOURNAL: Immunology 112 (4): p669-673 August 2004 2004
MEDIUM: print
ISSN: 0019-2805

DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Expression of interleukin (IL)-4 is increased in tuberculosis and thought to be detrimental. We show here that in healthy contacts there is increased expression of its naturally occurring antagonist, IL-4delta2 (IL-4delta2). We identified contacts by showing that their peripheral blood mononuclear cells (PBMC) released interferon (IFN)-gamma in response to the Mycobacterium tuberculosis-specific antigen 6 kDa early secretory antigenic target (ESAT-6). Fresh unstimulated PBMC from these contacts contained higher levels of mRNA encoding IL-4delta2 (P=0.002) than did cells from ESAT-6 negative donors (noncontacts). These data indicate that contact with M. tuberculosis induces unusual, previously unrecognized, immunological events. We tentatively hypothesize that progression to active disease might depend upon the underlying ratio of IL-4 to IL-4delta2.

2/7/21 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014705342 BIOSIS NO.: 200400071598
Helicobacter pylori cag pathogenicity island is associated with reduced expression of interleukin-4 (IL-4) mRNA and modulation of the IL-4delta2 mRNA isoform in human gastric mucosa.
AUTHOR: Orsini Barbara (Reprint); Ottanelli Barbara; Amedei Amedeo; Surrenti Elisabetta; Capanni Marco; Del Prete Gianfranco; Amorosi Andrea; Milani Stefano; D'Elios Mario Milco; Surrenti Calogero
AUTHOR ADDRESS: Department of Clinical Pathophysiology, Gastroenterology Unit, CIRHeP, Viale Pieraccini 6, I-50139, Florence, Italy**Italy
AUTHOR E-MAIL ADDRESS: b.orsini@dfc.unifi.it
JOURNAL: Infection and Immunity 71 (11): p6664-6667 November 2003 2003
MEDIUM: print
ISSN: 0019-9567 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Interleukin-4 (IL-4) and IL-4delta2 mRNA gastric expression was evaluated in healthy subjects and patients who did not have ulcers but were infected with Helicobacter pylori with or without the cag pathogenicity island (cag PAI). IL-4 mRNA was physiologically expressed by gastric epithelium and negatively influenced by H. pylori. Also, nonepithelial cells in the lamina propria of H. pylori-infected patients expressed IL-4 mRNA, whereas IL-4delta2 mRNA was found only in cag PAI-negative patients. Thus, gastric IL-4 takes part in the local immune response to H. pylori.

2/7/22 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014617357 BIOSIS NO.: 200300586076
IL-4delta2 participation in dendritic cell maturation regulation.
AUTHOR: Chikileva I (Reprint); Vasilenko R (Reprint); Puchkova G (Reprint); Sakutin V (Reprint); Terjoshin S (Reprint); Vasiliev A (Reprint); Khlebnikov V (Reprint); Shingarova L; Kiselevsky M; Abramov V (Reprint)
AUTHOR ADDRESS: Inst. of Immunological Engineering, Lyubuchany, Russia** Russia
JOURNAL: European Cytokine Network 14 (Supplement 3): p91 Sept. 2003 2003
MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the International Cytokine Society Dublin, Ireland September 20-24, 2003; 20030920
ISSN: 1148-5493
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/23 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014617349 BIOSIS NO.: 200300586068
Immunoregulatory properties of IL-4 and IL-4delta2 system.
AUTHOR: Vasilenko R (Reprint); Chikileva I (Reprint); Khodyakova A (Reprint); Puchkova G (Reprint); Kulikova N (Reprint); Vasiliev A (Reprint); Kosarev I (Reprint); Khlienikov V (Reprint); Kiselevsky M; Ptitsyn L (Reprint); Abramov V (Reprint)
AUTHOR ADDRESS: Institute of Immunological Engineering, Lyubuchany, Russia **Russia
JOURNAL: European Cytokine Network 14 (Supplement 3): p89 Sept. 2003 2003
MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the International Cytokine Society Dublin, Ireland September 20-24, 2003; 20030920
ISSN: 1148-5493
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/24 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014605133 BIOSIS NO.: 200300563852
Unsuspected Th2 modulation: Human alveolar macrophages produce IL-4.
AUTHOR: Pouliot P (Reprint); Turmel V (Reprint); Gelinas E (Reprint); Bissonnette E Y (Reprint)
AUTHOR ADDRESS: Centre de Recherche, Hopital Laval, Institut Universitaire de Cardiologie et de Pneumologie de l'Universite Laval, 2725 ch. Sainte-Foy, Sainte-Foy, PQ, G1V 4G5, Canada**Canada
JOURNAL: Inflammation Research 52 (Supplement 2): pS 86 July 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 6th World Congress on Inflammation Vancouver, British Columbia, Canada August 02-06, 2003; 20030802
SPONSOR: International Association of Inflammation Societies
ISSN: 1023-3830
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/25 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014391938 BIOSIS NO.: 200300350657
Structural and functional properties of IL-4delta2, an alternative splice variant of human IL-4.
AUTHOR: Vasiliev Anatoly M; Vasilenko Raisa N; Kulikova Nataly L; Andreev Sergey M; Chikileva Irina O; Puchkova Galina Yu; Kosarev Igor V; Khodyakova Anna V; Khlebnikov Valentin S; Ptitsyn Leonid R; Shcherbakov Grygory Ya; Uversky Vladimir N (Reprint); DuBuske Lawrence M; Abramov Vyacheslav M
AUTHOR ADDRESS: Department of Chemistry and Biochemistry, University of California, Santa Cruz, Santa Cruz, CA, 95064, USA**USA
AUTHOR E-MAIL ADDRESS: uversky@hydrogen.ucsc.edu
JOURNAL: Journal of Proteome Research 2 (3): p273-281 May-June 2003 2003
MEDIUM: print
ISSN: 1535-3893 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Structural and functional properties of recombinant IL-4delta2, a naturally occurring splice variant of human IL-4 with a deletion of the

loop region 22-37, have been analyzed. IL-4delta2 has alpha-helical structure and most likely preserves the "up-up-down-down" topology typical of the four-helix-bundle cytokines. IL-4delta2 interacts specifically with the alpha chain of IL-4R and competes effectively with IL-4 for the common binding sites. Thus, IL-4delta2 may act as a regulator of the cytokine net, being the natural antagonist of IL-4.

2/7/26 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014249728 BIOSIS NO.: 200300208447
High levels of mRNA encoding IL-4 in unstimulated peripheral blood mononuclear cells from tuberculosis patients revealed by quantitative nested reverse transcriptase-polymerase chain reaction; correlations with serum IgE levels.
AUTHOR: Seah Geok Teng; Rook Graham A W (Reprint)
AUTHOR ADDRESS: Department of Medical Microbiology, Medical School, Windeyer Institute of Medical Sciences, Royal Free and University College, 46 Cleveland Street, London, W1T 4JF, UK**UK
JOURNAL: Scandinavian Journal of Infectious Diseases (Special Issue): p 49-52 2001 2001
MEDIUM: print
ISSN: 0036-5548
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The dominant view has been that there is little or no activation of Type 2 cytokine production in human tuberculosis. A novel approach to quantitative nested reverse transcriptase-polymerase chain reaction has revealed that this conclusion was based on technical inadequacies of earlier studies, particularly the failure to discriminate between IL-4 and the IL-4 splice variant, IL4delta2. A new approach reveals that the largest cytokine change in tuberculosis is a 1-2 log increase in copy number for mRNAs encoding IL-4 and IL-13, accompanied by a small decrease in expression of mRNA encoding interferon-gamma. The increased IL-4 level correlates with disease severity and with serum levels of IgE and soluble CD30, and may be attributable to the recently observed increase in conversion of cortisone into cortisol in tuberculous lesions. The implications of these findings for pathogenesis, vaccine design and immunotherapy are discussed, as effective reagents will need to downregulate this inappropriate Th2 component.

2/7/27 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014114806 BIOSIS NO.: 200300073525
Cloning of interleukin-4 delta2 splice variant (IL-4delta2) in chimpanzee and cynomolgus macaque: Phylogenetic analysis of delta2 splice variant appearance, and implications for the study of IL-4-driven immune processes.
AUTHOR: Gautherot Isabelle (Reprint); Burdin Nicolas; Seguin Delphine; Aujame Luc; Sodoyer Regis
AUTHOR ADDRESS: Research Department, Molecular Biology Section, Aventis Pasteur, 1541 Avenue Marcel Merieux, Campus Merieux, 69280, Marcy l'Etoile, France**France
AUTHOR E-MAIL ADDRESS: Isabelle.Gautherot@aventis.com
JOURNAL: Immunogenetics 54 (9): p635-644 December 2002 2002
MEDIUM: print
ISSN: 0093-7711
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The human interleukin-4 (IL-4) gene produces an exon 2-lacking alternative splice variant, termed IL-4delta2, and described as a naturally occurring antagonist of IL-4-driven activity. We report the isolation of an IL-4delta2 cDNA from chimpanzee (Pan troglodytes) bone marrow samples and cynomolgus macaque (Macaca fascicularis) activated peripheral lymph node cells. The complete IL-4 cDNA sequence from chimpanzee is also provided for the first time. The phylogenetic analysis of several known IL-4 sequences revealed a highly conserved structure of coding regions among primates, suggesting that alternative IL-4 transcript splicing may be a process shared by other simian and potentially pro-simian species as well. Extension of the study to other mammalian species led us to the assumption that generation of IL-4 splice variants may be common to primates, lagomorphs (rabbit), and rodents of the sciuridae family (woodchuck), but is unlikely to occur in mice and rats (muridae), for which IL-4 splice variants have indeed never been described. Potential implications of alternatively spliced cytokine products with possible antagonistic or competitive inhibitory function, for the choice of suitable animal models of IL-4-regulated immune processes, are discussed. This study also indicates the importance of considering alternative splicing when defining cytokine bioassays, most particularly in the present context of transcriptomics, involving the generalization of sequence-based detection methods such as quantitative reverse transcription PCR.

2/7/28 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014093286 BIOSIS NO.: 200300052005
Structural and biological properties of IL-4delta2.
AUTHOR: Vasiliev A (Reprint); Vasilenko R (Reprint); Kulikova N (Reprint); Andreev S (Reprint); Kosarev I (Reprint); Khlebnikov V (Reprint); Puchkova G (Reprint); Chikileva I (Reprint); Uversky V (Reprint); Sakulin V (Reprint); Abramov V M (Reprint)
AUTHOR ADDRESS: Institute of Immunological Engineering, JSC "Biopreparation", Lyubuchany, Russia**Russia
AUTHOR E-MAIL ADDRESS: rvasilenko@chehov.ru
JOURNAL: Journal of Interferon and Cytokine Research 22 (Supplement 1): p S-115 2002 2002
MEDIUM: print
CONFERENCE/MEETING: Joint Meeting of the International Society for Interferon and Cytokine Research, the International Cytokine Society, the Society for Leukocyte Biology, and the European Cytokine Society on Cytokines and Interferons Turin, Italy October 06-10, 2002; 20021006
SPONSOR: International Society for Interferon and Cytokine Research
ISSN: 1079-9907 _(ISSN print)
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/29 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013937130 BIOSIS NO.: 200200530641
Differential modulation of Interleukin-4 mRNA expression in human gastric mucosa from Helicobacter pylori cag-PAI+ and cag-PAI- strains
AUTHOR: Orsini Barbara (Reprint); Ottanelli Barbara (Reprint); Surrenti Elisabetta (Reprint); Milani Stefano (Reprint); Surrenti Calogero (Reprint)
AUTHOR ADDRESS: Florence, Italy**Italy
JOURNAL: Gastroenterology 122 (4 Suppl. 1): pA-426 April, 2002 2002
MEDIUM: print
CONFERENCE/MEETING: Digestive Disease Week and the 103rd Annual Meeting of the American Gastroenterological Association San Francisco, CA, USA May 19-22, 2002; 20020519
ISSN: 0016-5085
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/30 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013727757 BIOSIS NO.: 200200321268
Do alternatively spliced variants of IL-2 mRNA represent the endogenous IL-2 receptor blocker? A new avenue in the maze of transplant immunology
AUTHOR: Jurewicz Wieslaw A (Reprint); Bukilica Mira (Reprint); Jones Geraint V (Reprint); Cikota Bojana (Reprint); Baboolal Kesh (Reprint); Janezic Alenka L (Reprint)
AUTHOR ADDRESS: Welsh Transplantation Research Group, UWCM, Cardiff, UK**UK
JOURNAL: Journal of the American Society of Nephrology 12 (Program and Abstract Issue): p860A September, 2001 2001
MEDIUM: print
CONFERENCE/MEETING: ASN (American Society of Nephrology)/ISN (International Society of Nephrology) World Congress of Nephrology San Francisco, CA, USA October 10-17, 2001; 20011010
ISSN: 1046-6673
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation
LANGUAGE: English

2/7/31 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013703407 BIOSIS NO.: 200200296918
Acute cardiac transplant rejection is associated with low frequencies of interleukin-4 producing helper T-lymphocytes rather than with interleukin-4 promoter or splice variants
AUTHOR: Bijlsma Femke J (Reprint); van Kuik Joyce; Van Hoffen Els; de Jonge Nicolaas; Tilanus Marcel G J; Gmelig-Meyling Frits H J; De Weger Roel A
AUTHOR ADDRESS: Department of Pathology, University Medical Center Utrecht, H04.312, 3508 GA, Utrecht, Netherlands**Netherlands
JOURNAL: Human Immunology 63 (4): p317-323 April, 2002 2002
MEDIUM: print
ISSN: 0198-8859
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Interleukin-4 (IL-4) is a cytokine of the Th2 subtype. It is suggested that Th2 cytokines are involved in induction of tolerance towards the graft after organ transplantation. Therefore, we studied the association between the frequencies of IL-4 producing helper T lymphocytes (IL-4 HTL) and acute rejection in a panel of 31 cardiac transplant patients. It was also investigated whether these frequencies were influenced by: (1) a single nucleotide polymorphism (SNP) at position -590 in the promoter region of the IL-4 gene, which influences the production level of IL-4; and (2) the expression of an IL-4 splice variant (IL-4delta2), which inhibits the IL-4 receptor. Frequencies of IL-4 HTL were determined by limiting dilution analysis. Genotyping for the SNP was carried out by sequencing. The ratio of wild type versus IL-4delta2 mRNA was determined by quantitative RT-PCR of mRNA isolated from stimulated MNC of cardiac transplant patients. Frequencies of IL-4 HTL were significantly higher in patients who did not suffer from acute cardiac transplant rejection, than in patients that suffered from at least one rejection episode requiring treatment in the first year after heart transplantation. The genotype of the promoter SNP and the ratio between wild type/splice variant IL-4 mRNA did not influence the measured frequencies of IL-4 HTL or the presence of transplant rejection itself.

2/7/32 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013396782 BIOSIS NO.: 200100568621
IL-4 and IL-4delta2 as a system of immune response regulation
AUTHOR: Vasilenko R N (Reprint); Puchkova G Yu (Reprint); Kosarev I V (Reprint); Khodyakova A V (Reprint); Vasiliev A M (Reprint); Chikileval I O; Sharova N I; Yarilin A A; Ptitsyn L P (Reprint); Abramov V M (Reprint)
AUTHOR ADDRESS: Institute of Immunological Engineering, 142380, Lyubuchany, Moscow Region, Russia**Russia
JOURNAL: Journal of Interferon and Cytokine Research 24 (Supplement 1): p S.91 2001 2001
MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the International Society for Interferon and Cytokine Research Cleveland,, OH, USA October 07-11, 2001; 20011007
ISSN: 1079-9907
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation
LANGUAGE: English

2/7/33 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013351169 BIOSIS NO.: 200100523008
Interleukin-4 and its alternatively spliced variant (IL-4delta2) in patients with atopic asthma
AUTHOR: Seah Geok Teng; Gao Pei Song; Hopkin Julian M; Rook Graham A W (Reprint)
AUTHOR ADDRESS: Department of Medical Microbiology, Windeyer Institute of Medical Sciences, 46 Cleveland Street, London, W1T 4JF, UK**UK
JOURNAL: American Journal of Respiratory and Critical Care Medicine 164 (6): p1016-1018 September 15, 2001 2001
MEDIUM: print
ISSN: 1073-449X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The interleukin-4 (IL-4) splice variant (IL-4delta2) is known to antagonize many biological activities of IL-4, and this challenges our understanding of the role of IL-4 in asthma. Studies that have used nonspecific antibodies, probes, and/or primers to quantify IL-4 in clinical samples would not have distinguished the expression of IL-4 from IL-4delta2. This is the first study to examine patients with chronic asthma and atopy for IL-4delta2 mRNA in their peripheral blood mononuclear cells without antigen stimulation, using a quantitative nested reverse-transcription polymerase chain reaction (RT-PCR) protocol. The median IL-4 mRNA copy number in cells from the patients with asthma was 2.8 logs higher than in a comparator group of patients with tuberculosis ($p = 0.0005$) and 4.5 logs higher ($p = 0.0004$) than in healthy control subjects. In contrast, IL-4delta2 expression in cells from patients with asthma was similar to that seen in cells from patients with tuberculosis. Hence, the median ratio of IL-4 to IL-4delta2 was 500-fold higher in the patients with asthma when compared with either patients with tuberculosis or healthy control subjects. The relative expression of IL-4 and IL-4delta2 may be a reason for the functional diversity of Th2 cells in different clinical conditions, and a hitherto unexplored mechanism for the pulmonary pathology in patients with atopic asthma.

2/7/34 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013217626 BIOSIS NO.: 200100389465
The usefulness of competitive PCR: Airway gene expression of IL-5, IL-4, IL-4delta2, IL-2, and IFNgamma in asthma
AUTHOR: Glare E M; Divjak M; Bailey M J; Walters E H (Reprint)
AUTHOR ADDRESS: Discipline of Medicine, Royal Hobart Hospital, University

of Tasmania Medical School, Hobart, Australia**Australia
JOURNAL: Thorax 56 (7): p541-548 July, 2001 2001
MEDIUM: print
ISSN: 0040-6376
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Background-Asthma has been described as an eosinophilic bronchitis driven by interleukin (IL)-4 and IL-5. The quantification of cytokine mRNA levels in airway samples has been confounded by housekeeping gene expression which differs between and within asthmatics and controls. Methods-The usefulness of competitive reverse transcriptase-polymerase chain reaction (RT-PCR) that is independent of housekeeping gene expression for quantitating the mRNA for interferon (IFN)gamma, IL-2, IL-5, IL-4 and its receptor antagonist encoding splicing variant IL-4delta2 was determined in a cross sectional study of 45 normal control subjects and 111 with asthma. Results-Atopic controls and atopic asthmatic subjects expressed more IL-5 than non-atopic controls ($p<0.02$) in bronchoalveolar lavage (BAL) cells, but not in biopsy specimens. IL-5 mRNA expression in BAL cells from asthmatic subjects using inhaled corticosteroids (ICS) was significantly lower than those not receiving ICS ($p=0.04$). IL-2 mRNA levels differed with steroid use in biopsy specimens but not in BAL cells. IFNgamma, IL-4, and IL-4delta2 mRNA levels did not differ between any groups and were not affected by steroid use. IL-4 and IL-4delta2 mRNA levels were positively correlated ($p<0.0001$), suggesting coordinated transcription. Conclusions-While the signal differentiation of competitive PCR in asthma may rival that of in situ hybridisation and immunohistochemistry, the method is expensive and wasteful of material.

2/7/35 (Item 19 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0013201169 BIOSIS NO.: 200100373008
Alternatively spliced variants of IL-2 mRNA in sequential transplant kidney core needle biopsies
AUTHOR: Janezic A L (Reprint); Bukilica M; Jones G V; Khanna R; Morris-Stiff G; Jurewicz W A
AUTHOR ADDRESS: Welsh Transplantation Research Group, Department of Surgery, UWCM, Cardiff, CF14 4XN, UK**UK
JOURNAL: Transplantation Proceedings 33 (1-2): p383-386 February-March, 2001 2001
MEDIUM: print
CONFERENCE/MEETING: XVIII International Congress of the Transplantation Society Rome, Italy August 29-September 01, 2000; 20000829
SPONSOR: Transplantation Society
ISSN: 0041-1345
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/36 (Item 20 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0012786340 BIOSIS NO.: 200000504653
Immunologic therapies in allergic disorders: Current aspects
AUTHOR: Wahn V (Reprint)
AUTHOR ADDRESS: Klinik fuer Kinder und Jugendliche, Brandenburgisches Allergie- und Asthmazentrum fuer Kinder und Jugendliche, Klinikum Uckermark, Auguststrasse 23, D-16303, Schwedt/Oder, Germany**Germany
JOURNAL: Allergologie 23 (8): p371-395 August, 2000 2000
MEDIUM: print
ISSN: 0344-5062
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: German

ABSTRACT: Using currently available antiallergic drugs the majority of patients suffering from allergic diseases can be sufficiently treated. However, a small group of polyallergic patients with severe symptoms exists for whom new treatment modalities would be highly desirable. Several of such innovative therapies are derived from basic immunology and have been developed from cell culture experiments over animal models to clinical studies. In this review an attempt is made to systematically characterize these new ideas, illustrate mechanisms of action and summarize the current status with regard to clinical application.

2/7/37 (Item 21 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0012735438 BIOSIS NO.: 200000453751
The recombinant aglycosilated IL-4delta2 participates in the regulation of IFN-gamma and IL-4 activities
AUTHOR: Vasilenko R (Reprint); Khodyakova A (Reprint); Ptitsyn L (Reprint); Kosarev I (Reprint); Vasiliev A (Reprint); Chernovskaya T (Reprint); Uversky V (Reprint); Denesyuk A (Reprint); Zav'yalov V (Reprint)
AUTHOR ADDRESS: Institute of Immunological Engineering, Lyubuchany, Moscow Region, Russia**Russia
JOURNAL: Cytokine 11 (11): p950 Nov., 1999 1999
MEDIUM: print
CONFERENCE/MEETING: Seventh Annual Conference of the International Cytokine Society Hilton Head, South Carolina, USA December 5-9, 1999; 19991205
SPONSOR: The International Cytokine Society
ISSN: 1043-4666
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/38 (Item 22 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0012679973 BIOSIS NO.: 200000398286
Four new members expand the interleukin-1 superfamily
AUTHOR: Smith Dirk E; Renshaw Blair R; Ketchem Randal R; Kubin Marek; Garka Kirsten E; Sims John E (Reprint)
AUTHOR ADDRESS: Immunex Corp., 51 University St., Seattle, WA, 98101, USA** USA
JOURNAL: Journal of Biological Chemistry 275 (2): p1169-1175 January 14, 2000 2000
MEDIUM: print
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: We report here the cloning and characterization of four new members of the interleukin-1 (IL-1) family (FIL1delta, FIL1epsilon, FIL1zeta, and FIL1eta, with FIL1 standing for "Family of IL-1"). The novel genes demonstrate significant sequence similarity to IL-1alpha, IL-1beta, IL-1ra, and IL-18, and in addition maintain a conserved exon-intron arrangement that is shared with the previously known members of the family. Protein structure modeling also suggests that the FIL1 genes are related to IL-1beta and IL-1ra. The novel genes form a cluster with the IL-1s on the long arm of human chromosome 2.

2/7/39 (Item 23 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0012353423 BIOSIS NO.: 200000071736

Asthmatic airway biopsy specimens are more likely to express the IL-4 alternative splice variant IL-4delta2
AUTHOR: Glare Eric M; Divjak Maja; Rolland Jennifer M; Walters E Haydn (Reprint)
AUTHOR ADDRESS: Department of Respiratory Medicine, Alfred Hospital, Prahran, Melbourne, Victoria, Australia**Australia
JOURNAL: Journal of Allergy and Clinical Immunology 104 (5): p978-982 Nov., 1999 1999
MEDIUM: print
ISSN: 0091-6749
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Background: The human IL4 gene, has been shown to express the alternatively spliced messenger (m)RNA IL-4delta2. IL-4delta2 is missing the entire sequence from exon 2 and has been identified as an IL-4 receptor antagonist. Objective: We sought to distinguish IL-4 and IL-4delta2 mRNA in respiratory tract tissue for the first time. Methods: A novel competitive PCR assay was established with primers designed on either side of the alternative splice junction of the IL4 gene, allowing the simultaneous quantitation of both IL-4 and IL-4delta2 mRNA from one reaction. Results: IL-4 and IL-4delta2 were differentially expressed in 4 nasal polyps. No difference was seen in endobronchial biopsy specimens for IL-4 mRNA expression between control subjects (median, 2.8 X 102 copies/mug RNA; range, 0-3.7 X 103 copies/mug RNA) and asthmatic subjects (median, 1.4 X 102 copies/mug RNA; range, 0-4.7 X 102 copies/mug RNA). However, significantly more asthmatic subjects (6 of 9) than control subjects (1 of 7) expressed IL-4delta2 (P = .036). Expression of IL-4 variants was unaffected by atopic status. Conclusions: Given that IL-4delta2 is an IL-4 receptor antagonist, these results indicate that it is crucial to be able to distinguish IL-4delta2 from IL-4 when assessing IL4 gene expression. Increased expression of IL-4delta2 in stable asthmatic subjects suggests that the balance of IL-4 and IL-4delta2 may modulate asthmatic inflammation.

2/7/40 (Item 24 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0012315735 BIOSIS NO.: 200000034048
Production of the recombinant hIL-4delta2, a native isoform of the human interleukin-4, in Escherichia coli cells
AUTHOR: Ptitsyn L R (Reprint); Smirnov S V; Al'tman I B; Samsonova N N; Khodyakova A V; Vasilenko R N
AUTHOR ADDRESS: Russian Federation State Research Center Genetika, Pervyi Dorozhnyi proezd 1, Moscow, 113545, Russia**Russia
JOURNAL: Bioorganicheskaya Khimiya 25 (8): p623-629 Aug., 1999 1999
MEDIUM: print
ISSN: 0132-3423
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Russian

ABSTRACT: Expression plasmids containing the synthetic gene hil-4delta2 was constructed to produce human interleukin-4 in Escherichia coli cells. Strains TG1(pBTIL-4delta2) and BL21(DE3)(pETIL-4delta2) produced the recombinant protein as inclusion bodies, and its production level was up to 30% of the total cell protein. The renatured hIL-4delta2 inhibited IL-4-stimulated T cell proliferation, and this effect was enhanced by cyclosporin A.

2/7/41 (Item 25 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0012183616 BIOSIS NO.: 199900443276
Effect of the recombinant aglycosilated alternative splice variant of IL-4 (IL-4delta2) on human thymocytes activated by IFN-gamma
AUTHOR: Vasilenko R N (Reprint); Khodyakova A V (Reprint); Puchkova G Yu (Reprint); Ptitsyn L R; Vasiliev A M (Reprint); Chernovskaya T V (Reprint); Zav'yalov V P (Reprint)
AUTHOR ADDRESS: Institute of Immunological Engineering, 142380, Lyubuchany, Russia**Russia
JOURNAL: Journal of Interferon and Cytokine Research 19 (SUPPL. 1): pS106 Sept., 1999 1999
MEDIUM: print
CONFERENCE/MEETING: Meeting of the International Society for Interferon and Cytokine Research with the participation of the European Cytokine Society Paris, France September 5-9, 1999; 19990905
SPONSOR: European Cytokine Society
International Society for Interferon and Cytokine Research
ISSN: 1079-9907
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation
LANGUAGE: English

2/7/42 (Item 26 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011849280 BIOSIS NO.: 199900108940
In chronic lymphocytic leukaemia, both leukaemic B and normal T cells express IL4-m RNA, but decreased amounts of the IL-4 spliced variant, IL-4 Delta 2
AUTHOR: Kaminski A (Reprint); Demaine A; Prentice A G
AUTHOR ADDRESS: Combined Lab., Derriford Hosp., Plymouth, UK**UK
JOURNAL: Blood 92 (10 SUPPL. 1 PART 1-2): p434A Nov. 15, 1998 1998
MEDIUM: print
CONFERENCE/MEETING: 40th Annual Meeting of the American Society of Hematology Miami Beach, Florida, USA December 4-8, 1998; 19981204
SPONSOR: The American Society of Heamatology
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation
LANGUAGE: English

2/7/43 (Item 27 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011676043 BIOSIS NO.: 199800470290
Functional studies of human IL-2delta2 and IL-2delta3, alternative splice variants of interleukin-2
AUTHOR: Tsytsikov V N (Reprint); Yurovsky V V; Atamas S P; White B
AUTHOR ADDRESS: Univ. Maryland Sch. Med., Baltimore, MD 21201, USA**USA
JOURNAL: Arthritis and Rheumatism 41 (9 SUPPL.): pS351 Sept., 1998 1998
MEDIUM: print
CONFERENCE/MEETING: 62nd National Scientific Meeting of the American College of Rheumatology and the 33rd National Scientific Meeting of the Association of Rheumatology Health Professionals San Diego, California, USA November 8-12, 1998; 19981108
SPONSOR: American College of Rheumatology
Association of Rheumatology Health Professionals
ISSN: 0004-3591
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/44 (Item 28 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011674235 BIOSIS NO.: 199800468482
Interleukin-4 (IL-4) and IL-4 antagonist, IL-4delta2, expression in

synovial fluid from patients with juvenile rheumatoid arthritis (JRA)
AUTHOR: McCurdy Deborah K (Reprint); Zaldivar Frank; Sandborg Christy; Imfeld Karen; Berman Monique
AUTHOR ADDRESS: Children's Hosp. Orange County, Orange, CA 92868, USA**USA
JOURNAL: Arthritis and Rheumatism 41 (9 SUPPL.): pS49 Sept., 1998 1998
MEDIUM: print
CONFERENCE/MEETING: 62nd National Scientific Meeting of the American College of Rheumatology and the 33rd National Scientific Meeting of the Association of Rheumatology Health Professionals San Diego, California, USA November 8-12, 1998; 19981108
SPONSOR: American College of Rheumatology
Association of Rheumatology Health Professionals
ISSN: 0004-3591
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Citation
LANGUAGE: English

2/7/45 (Item 29 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0011428552 BIOSIS NO.: 199800222799
Molecular models of two competitive inhibitors, IL-2delta2 and IL-2delta3, generated by alternative splicing of human interleukin-2
AUTHOR: Denesyuk Alexander I (Reprint); Zav'yalov Vladimir P; Denessiouk Konstantin A; Korpela Timo
AUTHOR ADDRESS: Inst. Immunol. Eng., 142380 Lyubuchany, Chekhov District, Moscow, Russia**Russia
JOURNAL: Immunology Letters 60 (2-3): p61-66 Feb., 1998 1998
MEDIUM: print
ISSN: 0165-2478
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Molecular models of IL-2delta2 and IL-2delta3, two alternative splice variants of human IL-2 without exon 2 and 3, respectively, are described. These alternative splice variants attract particular interest as potential competitive inhibitors of the cytokine. Tertiary structure of IL-2 consists of four-helix bundle including helices A, B, C and D and a beta-pleated sheet. Exon 2 encodes the A-B loop (Asn30-Lys49 residues) linking helices A and B running in one direction. Rotation of the helix A around putative centre during the construction of IL-2delta2 model have not produced any significant changes in the hydrophobic core of IL-2 molecule. However, a large hole was formed on the surface of IL-2delta2 molecule instead of A-B loop in IL-2 fold. A high affinity IL-2 receptor is formed by combination of alpha, beta, and gammac chains. Comparison of the model of the receptor bound IL-2 with the model of IL-2delta2 has shown that their beta-chain binding sites have minimum differences as distinct from alpha and gammac chain-binding sites. Exon 3 encodes Ala50-Lys97 fragment which forms helices B and C with their short connecting loop. Model IL-2delta3 consists of helices A and D and long linking loop. This loop was composed of A-B and C-D loops which run in opposite directions in IL-2 structure and contain beta-strands making a beta-pleated sheet. Conformation of the linking loop relatively to helices A and D was stabilized by creation of a disulphide bond between cysteines 105 and 125. In addition, the hydrophobic residues of beta-sheet interact with the hydrophobic surface of A-D helical complex and close the latter from contacts with solution. Comparison of the model of IL-2 bound to receptor with IL-2delta3 model has shown that absence of helices B and C in IL-2delta3 model results in insignificant conformational changes only in residues interacting with y. chain of the receptor. The beta/gammac heterodimer is an intermediate affinity receptor of IL-2. Most likely, both IL-2delta2 and IL-2delta3 are naturally occurring IL-2 antagonists since they keep the ability of binding with an intermediate affinity receptor of this cytokine and fail to engage the alpha chain of its high affinity receptor.

2/7/46 (Item 30 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0011425519 BIOSIS NO.: 199800219766
Intrauterine infusion of high doses of pig trophoblast interferons has no antiluteolytic effect of cyclic gilts
AUTHOR: Lefevre Francois (Reprint); Martinat-Botte Francoise; Locatelli Alain; De Niu Ping; Terqui Michel; La Bonnardiere Claude
AUTHOR ADDRESS: Unite Virol. Immunol. Mol., 78352 Jouy-en-Josas Cedex, France**France
JOURNAL: Biology of Reproduction 58 (4): p1026-1031 April, 1998 1998
MEDIUM: print
ISSN: 0006-3363
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: In the pig species, the preimplanting trophoblast is known to synthesize and secrete high amounts of interferon during early development. Previous experiments in cyclic gilts using total conceptus secretory proteins suggested that porcine trophoblastic interferons, unlike those of ruminants, exert no effect on the luteal cycle. In the present experiment, cyclic Meishan gilts were divided into two groups, cannulated on both uterine horns, and given daily injections of either a placebo or increasing doses of a mixture of recombinant interferon-gamma and interferon-delta, on Days 11-14 of the estrous cycle. In treated gilts, the injected doses were much higher than those previously found in uterine perfusates from pregnant gilts. However, no significant differences could be found between the control (n = 4) and the treated (n = 5) group concerning the days of the estrous cycle for mid-decrease of progesterone (control: Day 14.5 +- 0.57 (mean +- SD); treated: Day 15 +- 1.25), the day of estrus (control: Day 19 +- 0.96; treated: Day 19.6 +- 0.55), and the subsequent ovulation rate (control: 14 +- 2.2 corpora lutea; treated: 13.1 +- 1.1 corpora lutea). These data confirm that pig trophoblastic interferons, unlike those of ruminants, do not themselves exert an antiluteolytic effect. A possible synergistic effect of embryonic estrogens on the luteal functions of nonpregnant sows remains to be determined.

2/7/47 (Item 31 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0011057504 BIOSIS NO.: 199799691564
Influence of fatty acid ethanolamides and DELTA-9-tetrahydrocannabinol on cytokine and arachidonate release by mononuclear cells
AUTHOR: Berdyshev Evguenii V; Boichot Elisabeth; Germain Noella; Allain Nathalie; Anger Jean-Pierre; Lagente Vincent (Reprint)
AUTHOR ADDRESS: Unite INSERM U 456, Lab. Pharmacodyn. Pharmacol. Mol., Lab. Toxicol., Fac. Sci. Pharm. Biol., Univ. Rennes 1, 2 ave. du Professeur Leon Bernard, 35043 Rennes, France**France
JOURNAL: European Journal of Pharmacology 330 (2-3): p231-240 1997 1997
ISSN: 0014-2999
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The effects of arachidonic acid ethanolamide (anandamide), palmitoylethanolamide and DELTA-9-tetrahydrocannabinoL on the production of tumor necrosis factor-alpha (TNF-alpha), interleukin-4, interleukin-6, interleukin-8, interleukin-10, interferon-gamma, p55 and p75 TNF-alpha soluble receptors by stimulated human peripheral blood mononuclear cells as well as (3H)arachidonic acid release by non-stimulated and N-formyl-Met-Leu-Phe (fMLP)-stimulated human monocytes were investigated. Anandamide was shown to diminish interleukin-6 and interleukin-8 production at low nanomolar concentrations (3-30 nM) but inhibited the production of TNF-alpha, interferon-gamma, interleukin-4 and p75 TNF-alpha soluble receptors at higher concentrations (0.3-3 mu-M).

Palmitoylethanolamide inhibited interleukin-4, interleukin-6, interleukin-8 synthesis and the production of p75 TNF-alpha soluble receptors at concentrations similar to those of anandamide but failed to influence TNF-alpha and interferon-y production. The effect of both compounds on interleukin-6 and interleukin-8 production disappeared with an increase in the concentration used. Neither anandamide nor palmitoylethanolamide influenced %interleukin%-10 synthesis. %DELTA% -9-Tetrahydrocannabinol exerted a biphasic action on pro-inflammatory cytokine production. TNF-alpha, interleukin-6 and interleukin-8 synthesis was maximally inhibited by 3 nM DELTA-9-tetrahydrocannabinol but stimulated by 3 mu-M DELTA-9-tetrahydrocannabinol, as was interleukin-8 and interferon-gamma synthesis. The level of interleukin-4, interleukin-10 and p75 TNF-alpha soluble receptors was diminished by 3 mu-M DELTA-9-tetrahydrocannabinol. (3H)Arachidonate release was stimulated only by high DELTA-9-tetrahydrocannabinol and anandamide concentrations (30 mu-M). These results suggest that the inhibitory properties of anandamide, palmitoylethanolamide and DELTA-9-tetrahydrocannabinol are determined by the activation of the peripheral-type cannabinoid receptors, and that various endogenous fatty acid ethanolamides may participate in the regulation of the immune response.

2/7/48 (Item 32 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010745832 BIOSIS NO.: 199799379892
Localization of IL-4 and IL-4 receptors in the human term placenta, decidua and amniochorionic membranes
AUTHOR: De Moraes-Pinto M I; Vince G S; Flanagan B F; Hart C A; Johnson P M (Reprint)
AUTHOR ADDRESS: Dep. Immunol., Univ. Liverpool, PO Box 147, Liverpool L69 3BX, UK**UK
JOURNAL: Immunology 90 (1): p87-94 1997 1997
ISSN: 0019-2805
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: There has been much recent interest in cytokine expression at the materno-fetal interface. Although T-helper 2 (Th2)-type cytokines have been described in the murine feto-placental unit, few studies have as yet been performed in human pregnancy. We have examined the production of interleukin-4 (IL-4) and expression of IL-4 receptors in the human term placenta, decidua and amniochorionic membranes. Immunohistochemical analyses revealed that cytotrophoblast, decidual macrophages and both maternal and fetal endothelial cells consistently expressed IL-4, whereas syncytiotrophoblast and placental macrophages showed an inconsistent pattern between specimens. High- and low-affinity IL-4 receptors were demonstrated by immunohistochemistry at the same cellular sites as stained for IL-4, and detection of IL-4 receptors was also variable in syncytiotrophoblast. Reverse-transcribed-polymerase chain reaction (RT-PCR) analysis showed that both IL-4 and its alternative splice variant, IL-4-delta-2, are produced both in placental villi and in amniochorionic and decidual tissue. Ligand-binding assays identified the presence, on isolated term syncytiotrophoblast microvillous plasma membrane vesicle preparations, of functional high-affinity binding sites for IL-4 with a Kd in the range 102-112 pM and an apparent receptor density in the rangE 99-102 times 10-8 sites/mg protein. Three human choriocarcinoma (BeWo, JEG-3 and Jar) and one amnion-derived (AV3) cell lines expressed IL-4 and both high- and low-affinity IL-4 receptors. The constitutive expression of both IL-4 and IL-4 receptors, together with the novel finding of the alternative splice variant IL-4-delta-2 in the immediate tissues at the materno-fetal interface suggest an immunobiological role for IL-4 in human pregnancy.

2/7/49 (Item 33 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010689315 BIOSIS NO.: 199799323375
Low-molecular-weight protein ligands from Onchocerca volvulus preferentially stimulate the human gamma-delta T cell V-delta-1+ subset
AUTHOR: Munk Martin E (Reprint); Schoel Bernd; Anding Peter; Brattig Norbert W; Kaufmann Stefan H E
AUTHOR ADDRESS: Dep. Med. III Rheumaol. Clinical Immunol., Charite Univ. Hosp., Humboldt Univ. zu Berlin, Schumannstr. 20/21, 10117 Berlin, Germany**Germany
JOURNAL: Journal of Infectious Diseases 174 (6): p1309-1315 1996 1996
ISSN: 0022-1899
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Onchocerciasis is a chronic infectious disease caused by the filarial nematode Onchocerca volvulus. A minor population of human gamma-delta T cells expressing V-delta-1 chains is preferentially stimulated by O. volvulus ligands in vitro. Therefore, the nature of the parasite ligand and the effector functions of V-delta-1+ T cells stimulated by O. volvulus was investigated. A 5- to 30-kDa ligand from the adult parasite lysate that is sensitive to proteinase treatment was identified. Presentation for preferential stimulation of V-delta-1+ T cells required processing. After in vitro stimulation with O. volvulus in the presence of %interleukin%-2, V-%delta%-1+ T cells produced interferon-gamma but not interleukin-4 and exhibited NK cytolytic activities. It is concluded that somatic 5- to 30-kDa protein ligands from O. volvulus stimulate V-delta-1+ T cells and that V-delta-1+ T cells play a role in immunity to O. volvulus.

2/7/50 (Item 34 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010597586 BIOSIS NO.: 199699231646
Identification and characterization of two alternative splice variants of human interleukin-2
AUTHOR: Tsytsikov Vacheslav N (Reprint); Yurovsky Vladmir V; Atamas Sergei P; Alms William J; White Barbara
AUTHOR ADDRESS: Univ. Maryland, MSTF Room 8-23, 10 South Pine St., Baltimore, MD 21201, USA**USA
JOURNAL: Journal of Biological Chemistry 271 (38): p23055-23060 1996 1996
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Our previous work showed that alternative splicing is used to make an inhibitory variant of human interleukin (IL)-4. Because of homology between IL-4 and IL-2 proteins and receptors, we tested whether alternative splicing is used to generate similar inhibitory variants of human IL-2. Messenger RNA from peripheral blood mononuclear cells was subjected to reverse transcription-polymerase chain reaction using IL-2 exon 1- and exon 4-specific primers. Two amplification products, named IL-2-delta-2 and IL-2-delta-3, were found in addition to the native IL-2 product. The IL-2-delta-2 cDNA sequence was identical to IL-2 cDNA throughout the entire coding region, except exon 2 was omitted by alternative splicing. In IL-2-delta-3 cDNA, the third exon of IL-2 was omitted by alternative splicing. Unlike IL-2, IL-2-delta-2 and IL-2-delta-3 did not stimulate T cell proliferation. However, both inhibited IL-2 costimulation of T cell proliferation, and both inhibited cellular binding of rhIL-2 to high affinity IL-2 receptors. Thus, IL-2 is the second cytokine that uses alternative splicing to generate variants that are competitive inhibitors.

2/7/51 (Item 35 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

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0010454104 BIOSIS NO.: 199699088164
Generation of a variant of human interleukin-4 by alternative splicing
AUTHOR: Alms William J; Atamas Sergei P; Yurovsky Vladimir V; White Barbara (Reprint)
AUTHOR ADDRESS: Univ. Maryland, MSTF Room 8-34, 10 South Pine Street, Baltimore, MD 21201, USA**USA
JOURNAL: Molecular Immunology 33 (4-5): p361-370 1996 1996
ISSN: 0161-5890
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A second species of interleukin-4 (IL-4) mRNA was identified using both a reverse transcription-polymerase chain reaction and an RNase protection assay. This novel IL-4 mRNA was 48 base pairs smaller than IL-4 mRNA, which is the size of IL-4 exon 2. Sequence data of cloned cDNA demonstrated that this variant contained IL-4 exons 1, 3 and 4, with exon I spliced directly to exon 3 in an open reading frame. The entire protein encoding region of this variant, named IL-4-delta-2, was identical to IL-4 except for the omission of exon 2. IL-4-delta-2 mRNA was detected in all human peripheral blood mononuclear cells tested and in purified CD3+ T cells. Amounts of both IL-4 and IL-4-delta-2 mRNAs increased upon T cell activation, although IL-4 mRNA increased to a greater extent than IL-4-delta-2 mRNA did. Human IL-3, IL-5, IL-13, and granulocyte macrophage-colony stimulating factor did not use alternative splicing to delete exon 2. We speculate that IL-4-delta-2 may regulate IL-4 function.

2/7/52 (Item 36 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0010181612 BIOSIS NO.: 199698649445
An alternative splice variant of human IL-4, IL-4-delta-2, inhibits IL-4 stimulated T cell proliferation
AUTHOR: Atamas Sergei P (Reprint); Choi Jung; Yurovsky Vladimir V; White Barbara
AUTHOR ADDRESS: Division Rheumatol. Clinical Immunol., Univ. Maryland Baltimore, MSTF Room 8-23, 10 South Pine Street, Baltimore, MD 21201, USA **USA
JOURNAL: Journal of Immunology 156 (2): p435-441 1996 1996
ISSN: 0022-1767
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Alternative splicing of mRNA can generate protein isoforms that are preferentially expressed in different tissues or during different states of cell differentiation or activation. Protein isoforms may have different functions. In this study, we cloned, expressed, and tested functional effects of a naturally occurring splice variant of human IL-4, called IL-4-delta-2. In IL-4-delta-2, the second exon of IL-4 is omitted by alternative splicing, with exons 1, 3, and 4 joined in an open reading frame. We found that IL-4-delta-2 RNA is expressed in the PBMC of all donors tested, usually in lower amounts than IL-4 RNA. In contrast, IL-4-delta-2 RNA is expressed in much higher levels than IL-4 RNA in thymocytes and bronchoalveolar lavage cells, suggesting tissue specificity of expression. IL-4-delta-2 cDNA was expressed in yeast. Recombinant human (rh) IL-4-delta-2 was partially purified and found to be glycosylated, with a protein core of 13 to 15 kDa. Unlike rhIL-4, rhIL-4-delta-2 did not act as a costimulator for T cell proliferation. However, rhIL-4-delta-2 inhibited the ability of rhIL-4 to act as a T cell costimulator. Inhibition was independent of glycosylation and was not mediated by toxicity. Iodinated IL-452 was found to bind specifically to human PBMC and tumor lines known to express IL-4 receptors. Excess unlabeled IL-4 inhibited cellular binding of labeled IL-4-delta-2. Thus, rhIL-4-delta-2 is a naturally occurring splice variant of IL-4 that is preferentially expressed in the thymus and airways and inhibits function of complete IL-4. The balance between IL-4 and IL-4-delta-2 may be important in the regulation of IL-4 effects.

2/7/53 (Item 37 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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0009927548 BIOSIS NO.: 199598395381
Functional studies of human IL-4-delta-2, an alternative splice variant of interleukin-4
BOOK TITLE: The 9th International Congress of Immunology
AUTHOR: Atamas S P; Yurovsky V V; White B
BOOK AUTHOR/EDITOR: 9TH INTERNATIONAL CONGRESS OF IMMUNOLOGY
AUTHOR ADDRESS: Univ. Maryland Sch. Med., Baltimore, MD, USA**USA
p80 1995
BOOK PUBLISHER: 9th International Congress of Immunology {a}, San Francisco, California, USA
CONFERENCE/MEETING: Meeting Sponsored by the American Association of Immunologists and the International Union of Immunological Societies San Francisco, California, USA July 23-29, 1995; 19950723
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

2/7/54 (Item 38 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0008046584 BIOSIS NO.: 199243015175
THE INDUCED MODULATION OF IL-2 ACTIVITY IN MITOGEN STIMULATED SPLENOCYTES
OF MICE OF VARYING AGES
AUTHOR: NAKANO Y (Reprint); PROSS S; NEWTON C; FRIEDMAN H
AUTHOR ADDRESS: UNIV S FLORIDA COLL MED, TAMPA, 33612
JOURNAL: FASEB Journal 6 (5): pA1876 1992
CONFERENCE/MEETING: 1992 MEETING OF THE FEDERATION OF AMERICAN SOCIETIES
FOR EXPERIMENTAL BIOLOGY (FASEB), PART II, ANAHEIM, CALIFORNIA, USA, APRIL
5-9, 1992. FASEB (FED AM SOC EXP BIOL) J.
ISSN: 0892-6638
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

2/7/55 (Item 39 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2006 BIOSIS. All rts. reserv.

0007982381 BIOSIS NO.: 199242085272
%INTERLEUKIN%-%DELTA% ASSOCIATION WITH AMNIOTIC FLUID LEUKOTAXIS AND
CHORIOAMNIONITIS
AUTHOR: CHEROUNY P H (Reprint); PANKUCH G A; ROMERO R; BOTTI J J; APPELBAUM
P C
AUTHOR ADDRESS: DEP OB/GYN, UNIV HOSP, PENN STATE UNIV, HERSHEY, PA, USA**
USA
JOURNAL: American Journal of Obstetrics and Gynecology 166 (1 PART 2): p 385 1992
CONFERENCE/MEETING: 12TH ANNUAL MEETING OF THE SOCIETY OF PERINATAL
OBSTETRICIANS, ORLANDO, FLORIDA, USA, FEBRUARY 3-8, 1992. AM J OBSTET GYNECOL.
ISSN: 0002-9378
DOCUMENT TYPE: Meeting

RECORD TYPE: Citation
LANGUAGE: ENGLISH

2/7/56 (Item 40 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0007484575 BIOSIS NO.: 199140127466
ENHANCEMENT OF %INTERLEUKIN% 1 SECRETION BY %DELTA%-9 TETRAHYDROCANNABINOL
TREATMENT OF CULTURED MACROPHAGES
AUTHOR: KLEIN T K (Reprint); ZHU W; NEWTON C; SHIVERS S; LANCZ G; FRIEDMAN
H
AUTHOR ADDRESS: UNIV S FLA, TAMPA, FLA 33612, USA**USA
JOURNAL: FASEB Journal 5 (4): pA498 1991
CONFERENCE/MEETING: 75TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN
SOCIETIES FOR EXPERIMENTAL BIOLOGY, ATLANTA, GEORGIA, USA, APRIL 21-25,
1991. FASEB (FED AM SOC EXP BIOL) J.
ISSN: 0892-6638
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

2/7/57 (Item 41 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0007043818 BIOSIS NO.: 199039097207
EXPRESSION OF CYTOKINES BY INFILTRATING T-CELLS
AUTHOR: COHEN A (Reprint); MILLS G; MARTINEZ-VALDEZ H
AUTHOR ADDRESS: DIV IMMUNOL-RHEUMATOL, RES INST, HOSP SICK CHILD, TORONTO,
ONT M5G 1X8, CAN**CANADA
JOURNAL: Journal of Cellular Biochemistry Supplement (14 PART B): p30 1990
CONFERENCE/MEETING: SYMPOSIUM ON MOLECULAR PATHWAYS OF CYTOKINE ACTION HELD
AT THE 19TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) SYMPOSIA ON
MOLECULAR AND CELLULAR BIOLOGY, PARK CITY, UTAH, USA, JANUARY 27-FEBRUARY
3, 1990. J CELL BIOCHEM SUPPL.
ISSN: 0733-1959
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

2/7/58 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

14103085 Genuine Article#: 939ZK Number of References: 36
Title: Down-regulation of IFN-gamma-producing CD56(+) T cells after combined low-dose cyclosporine/prednisone treatment in patients with Behcet's uveitis
Author(s): Ahn JK; Seo JM; Yu JS; Oh FS; Chung H; Yu HG (REPRINT)
Corporate Source: Seoul Natl Univ,Coll Med, Dept Ophthalmol,28 Yongon Dong/Seoul 110744//South Korea/ (REPRINT); Seoul Natl Univ,Coll Med, Dept Ophthalmol,Seoul 110744//South Korea/; Dankook Univ,Coll Med, Dept Pediat,Cheonan//South Korea/(hgonyu@snu.ac.kr)
Journal: INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, 2005, V46, N7 (JUL)
, P2458-2464
ISSN: 0146-0404 Publication date: 20050700
Publisher: ASSOC RESEARCH VISION OPHTHALMOLOGY INC, 12300 TWINBROOK PARKWAY, ROCKVILLE, MD 20852-1606 USA
Language: English Document Type: ARTICLE
Abstract: PURPOSE. To investigate the effects of combined low-dose cyclosporine and prednisone (Cs/Pd) treatment on circulating CD56(+) T cells in patients with Behcet's uveitis.

METHODS. Ten patients with Behc, et's uveitis and 10 healthy control subjects were prospectively recruited. The patients were treated with Cs/Pd for 2 months. Phenotypic and functional changes in circulating CD56(+) T cells were assayed before and after treatment. CD56(+) T-cell subsets were determined by flow cytometric analysis with monoclonal antibodies for CD3, CD4, CD8, CD56, pan gamma delta TCR, and V alpha 24. The absolute numbers of cells in the lymphocyte subsets were calculated. Cytokine (IFN-gamma, IL-4, and IL-10) expressions were measured by ELISA and by intracellular cytokine staining.

RESULTS. The proportions of CD56(+) T cells, specifically CD8(high)CD56(+) and CD56(+)gamma delta T-cell subsets, were significantly higher in active Behc, et's uveitis but normalized after treatment, whereas the total T-lymphocyte count and the absolute numbers of CD56(+) T cells were unaffected by treatment. The levels of IFN-gamma and IL-4 were elevated in aqueous humor and serum in Behc, et's uveitis ($P < 0.001$), whereas IL-10 was not detected. After treatment, serum IL-4 levels markedly increased ($P < 0.001$), and IFN-gamma production by circulating CD56(+) T cells was then suppressed. IL-4 and -10 production by CD56(+) T cells was increased by treatment, but in contrast, minimal changes were found in CD56(+) T cells.

CONCLUSIONS. The results imply that Cs/Pd treatment for Behc, et's uveitis selectively affects the population of and the cytokine expression in CD56(+) T cells, but without significant changes in CD56(+) T cells, and that IFN-gamma-producing CD56(+) T cells are the central pathogenic immune cells in Behc, et's uveitis.

2/7/59 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

14086644 Genuine Article#: 937ES Number of References: 35
Title: The molecular mechanism of human resistance to HIV-1 infection in persistently infected individuals - A review, hypothesis and implications
Author(s): Becker Y (REPRINT)
Corporate Source: Hebrew Univ Jerusalem,Fac Med, Dept Mol Virol,IL-91010 Jerusalem//Israel/ (REPRINT); Hebrew Univ Jerusalem,Fac Med, Dept Mol Virol,IL-91010 Jerusalem//Israel/(becker@md.huji.ac.il)
Journal: VIRUS GENES, 2005, V31, N1 (AUG), P113-120
ISSN: 0920-8569 Publication date: 20050800
Publisher: SPRINGER, VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS
Language: English Document Type: REVIEW
Abstract: Resistance to HIV-1 infection in Europeans is associated with a mutation in the gene that codes for the CCR5 protein that is present in Th2 cells and serves as a coreceptor for HIV-1 R5 strain. A deletion of 32 amino acids from the cytokine receptor prevents infection. This mutation prevails in Europeans and is absent in Africans. However, duplication of a gene that codes for a chemokine that binds to the CCR5 was discovered in Africans (mean gene copy 6 while in non-Africans the mean gene copy is 3). Higher expression of these genes protects T cells against HIV-1 infection in vitro. It should be noted that resistance to HIV-1 R5 variant does not protect against HIV-1 R4 variant. It was reported that a minority of highly HIV-1 exposed African professional sex workers (APSW) were resistant to the virus infection during a 10 years period. Recently, the analysis of the cytokines in the serum of the persistently infected seronegative women revealed that the latter hypo-expresses the cytokine IL-4. Since the molecular events during HIV-1 infection are associated with a marked increase in the levels of IL-4 and IgE in the sera of the infected individuals, it suggests that

AIDS is an allergy. Thus, a very low level of IL-4 production may abrogate the virus infection. Studies on the human IL-4 gene revealed that together with the IL-4 mRNA a spliced variant with a deletion of exon 2 is synthesized. The latter is a natural antagonist of IL-4 and when expressed in an individual at a level higher than IL-4, the person will resist a microbial infection (e. g. Mycobacterium tuberculosis) or asthma. The present hypothesis suggests that the HIV-1 resistant APSWs produce more IL-4 delta 2 molecules than IL-4 molecules. The binding of IL-4 delta 2 to IL-4 receptors on T and B cells prevents their functions and the infection by HIV-1. The implications of these studies are that treatment of HIV-1 infected people with drugs that will block the IL-4 receptors will stop HIV-1 infections and the determination of the levels of IL-4 and IL-4 delta 2 in the sera of HIV-1+ patients will enable to identify the individuals that have a natural resistance to HIV-1/AIDS and those who need treatments.

2/7/60 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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13706404 Genuine Article#: 903VL Number of References: 72
Title: The peroxisome proliferator-activated receptor gamma ligand rosiglitazone delays the onset of inflammatory bowel disease in mice with interleukin 10 deficiency
Author(s): Lytle C; Tod TJ; Vo KT; Lee JW; Atkinson RD; Straus DS (REPRINT)
Corporate Source: Univ Calif Riverside,Dept Biol, Div Biomed Sci,Riverside//CA/92521 (REPRINT); Univ Calif Riverside,Dept Biol, Div Biomed Sci,Riverside//CA/92521(daniel.straus@ucr.edu)
Journal: INFLAMMATORY BOWEL DISEASES, 2005, V11, N3 (MAR), P231-243
ISSN: 1078-0998 Publication date: 20050300
Publisher: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA
Language: English Document Type: ARTICLE
Abstract: Aims: To test whether the peroxisome proliferator-activated receptor gamma (PPARgamma) ligand rosiglitazone (Ro) has therapeutic activity in the IL-10(-/-) mouse model of inflammatory bowel disease (IBD), and to identify the cellular targets and molecular mechanisms of Ro action.

Methods: The progression of spontaneous chronic colitis in IL-10(-/-) mice was compared in 5-week-old mice fed a standard diet with or without Ro for 12 weeks. The possible therapeutic effect of Ro was also tested over a 6-week interval in older IL-10(-/-) mice with established IBD.

Results: Treatment with Ro slowed the onset of spontaneous IBD in IL-10(-/-) mice. Crypt hyperplasia, caused by increased mitotic activity of crypt epithelial cells, was also delayed by Ro. Treatment with Ro significantly decreased expression of interferon gamma (IFNgamma), interleukin 17 (IL-17), tumor necrosis factor a, and the inducible nitric oxide synthase mRNA in the colon, whereas expression of IL-12p40 was unchanged. PPARgamma was detected in epithelial cells throughout the crypts and surface. Ro increased expression of PPARgamma protein in these cells, suggesting the existence of a positive feedback loop that would potentiate its action in these cells. Ro also specifically increased expression of a novel PPAR target, aquaporin-8 (AQP8), in differentiated colonic epithelial surface cells, demonstrating that PPARgamma is not only present but also regulates gene expression in these cells in vivo. Finally, Ro was ineffective in improving disease activity in older IL-10(-/-) mice with established IBD.

Conclusions: PPARgamma is expressed, and the PPARgamma ligand Ro regulates gene expression in colonic epithelial cells. As a single agent, Ro works best for disease prevention in the IL-10(-/-) mouse model for IBD.

2/7/61 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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13191773 Genuine Article#: 857WC Number of References: 40
Title: Efficacy and safety of a monoclonal antibody recognizing interleukin-8 in COPD - A pilot study
Author(s): Mahler DA (REPRINT) ; Huang S; Tabrizi M; Bell GM
Corporate Source: Dartmouth Hitchcock Med Ctr,Pulm & Crit Care Med Sect,1 Med Ctr Dr/Lebanon//NH/03756 (REPRINT); Dartmouth Coll Sch Med,Lebanon//NH/; Abgenix Inc,Fremont//CA/(Donald.a.mahler@hitchcock.org)
Journal: CHEST, 2004, V126, N3 (SEP), P926-934
ISSN: 0012-3692 Publication date: 20040900
Publisher: AMER COLL CHEST PHYSICIANS, 3300 DUNDEE ROAD, NORTHBROOK, IL 60062-2348 USA
Language: English Document Type: ARTICLE
Abstract: Study objective: To investigate the efficacy and safety of a fully human monoclonal antibody recognizing the chemokine interleukin (IL)-8 in patients with COPD.

Design: Randomized, double-blind, parallel-group, placebo-controlled trial.

Setting: Eighteen clinics/hospitals in the United States.
Patients: One hundred nine patients with stable COPD.

Interventions: Three IV infusions of either monoclonal antibody recognizing IL-8 (800-mg loading dose; 400-mg subsequent doses) or active buffer solution administered monthly over a 3-month period.

Measurements and results: The differences in the transition dyspnea index (TDI) total score, the primary outcome measure, between fully human monoclonal IgG, antibody directed against IL-8 and placebo were 0.8, 1.0, 0.8, and 0.3 at week 2 ($p = 0.046$) and months 1 to 3, respectively. At all time points, the proportion of patients achieving greater than or equal to 1 point improvement in the TDI was greater for the monoclonal antibody group compared with the placebo group: 28% vs 11% at week 2 ($p = 0.028$). There were no significant differences observed for lung function, health status, 6-min walking distance, and adverse events between groups.

Conclusions: The results of this phase 2 study suggest that neutralization of IL-8 with monoclonal antibody therapy may improve dyspnea in patients with COPD. These results support the further investigation of monoclonal antibody therapy targeting IL-8 for the treatment of this disease.

2/7/62 (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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11922738 Genuine Article#: 711FW Number of References: 37
Title: V gamma 9/V delta 2 T lymphocytes in Italian patients with Behcet's disease - evidence for expansion, and tumour necrosis factor receptor II and interleukin-12 receptor beta(1) expression in active disease
Author(s): Triolo G (REPRINT) ; Accardo-Palumbo A; Dieli F; Ciccia F; Ferrante A; Giardina E; Di Sano C; Licata G
Corporate Source: Policlin Univ,Cattedra Reumatol, Ist Clin Med,Piazza Clin 2/I-90127 Palermo//Italy/ (REPRINT); Univ Palermo,Dept Internal Med, Sect Rheumatol & Clin Immunol,Palermo//Italy/; Univ Palermo,Dept BioPathol, Sect Gen Pathol,Palermo//Italy/; Univ Palermo,Div Internal Med, Dept Internal Med,Palermo//Italy/
Journal: ARTHRITIS RESEARCH & THERAPY, 2003, V5, N5, PR262-R268
ISSN: 1478-6362 Publication date: 20030000
Publisher: BIOMED CENTRAL LTD, MIDDLESEX HOUSE, 34-42 CLEVELAND ST, LONDON W1T 4LB, ENGLAND
Language: English Document Type: ARTICLE

Abstract: Behcet's disease is a multisystem disease in which there is evidence of immunological dysregulation. It has been proposed that gamma/delta T cells are involved in its pathogenesis. The aim of the present study was to assess the capacity of gamma/delta T cells with phenotype Vgamma9/Vdelta2, from a group of Italian patients with Behcet's disease, to proliferate in the presence of various phosphoantigens and to express tumour necrosis factor (TNF) and IL-12 receptors. Twenty-five patients and 45 healthy individuals were studied. Vgamma9/Vdelta2 T cells were analyzed by fluorescence activated cell sorting, utilizing specific monoclonal antibodies. For the expansion of Vgamma9/Vdelta2 T cells, lymphocytes were cultured in the presence of various phosphoantigens. The expression of TNF receptor II and IL-12 receptor beta(1) was evaluated with the simultaneous use of anti-TNF receptor II phycoerythrin-labelled (PE) or anti-IL-12 receptor beta(1) PE and anti-Vdelta2 T-cell receptor fluorescein isothiocyanate. There was a certain hierarchy in the response of Vgamma9/Vdelta2 T cells toward the different phosphoantigens, with the highest expansion factor obtained with dimethylallyl pyrophosphate and the lowest with xylose 1P. The expansion factor was fivefold greater in patients with active disease than in those with inactive disease or in control individuals. TNF receptor II and IL-12 receptor beta(1) expressions were increased in both patients and control individuals. The proportion of Vgamma9/Vdelta2 T cells bearing these receptors was raised in active disease when Vgamma9/Vdelta2 T cells were cultured in the presence of dimethylallyl pyrophosphate. These results indicate that Vgamma9/Vdelta2 T cell activation is correlated with disease progression and probably involved in the pathogenesis.

2/7/63 (Item 6 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

11143741 Genuine Article#: 613LB Number of References: 33
Title: Hematopoietic abnormalities in mice deficient in gpl130-mediated STAT signaling
Author(s): Jenkins BJ (REPRINT) ; Quilici C; Roberts AW; Grail D; Dunn AR; Ernst M
Corporate Source: Royal Melbourne Hosp,Ludwig Inst Canc Res, Mol Biol Lab,POB 2008/Melbourne/Vic 3050/Australia/ (REPRINT); Ludwig Inst Canc Res,Mol Biol Lab,Parkville/Vic/Australia/; Walter & Eliza Hall Inst Med Res,Parkville/Vic/Australia/
Journal: EXPERIMENTAL HEMATOLOGY, 2002, V30, N11 (NOV), P1248-1256
ISSN: 0301-472X Publication date: 20021100
Publisher: ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH, NEW YORK, NY 10010-1710 USA
Language: English Document Type: ARTICLE
Abstract: Objective. Studies on mice lacking the common receptor subunit gp130 reveal that activation of gp130-dependent signaling pathways is essential for normal fetal and adult hematopoiesis. However, the extent to which hematopoiesis is dependent upon activation of a particular gp130 signaling pathway, namely STAT1/3 or SHP2/MAPK, is unknown. This study examined the specific contribution of gp130-mediated STAT1/3 signaling to the regulation of hematopoiesis.

Materials and Methods. Hematopoiesis was examined at various developmental stages in mice homozygous for a targeted carboxy-terminal truncation mutation in gp130 (gp130(Delta/Delta)) that deletes all STAT1/3 binding sites, thereby abolishing gp130-mediated STAT1/3 activation.

Results. Adult gp130(Delta/Delta) mice have increased numbers of immature colony-forming unit spleen progenitor cells in the bone marrow and spleen, elevated numbers of committed myeloid progenitor cells in the spleen and peripheral blood, and leukocytosis. Increased progenitor cell production was observed in gp130(Delta/Delta) fetal livers from 14 days of gestation onward. In contrast, the circulating platelet count was reduced by 30% in gp130(Delta/Delta) mice, without any corresponding decrease in the number of bone marrow and splenic megakaryocytes. In liquid cultures, megakaryocytes from gp13(Delta/Delta) mice are smaller than those from wild-type mice and do not increase in size upon stimulation with interleukin-6 or interleukin-11. Administration of either interleukin-6 or %interleukin% -11 to gp130(%Delta%/Delta) mice failed to increase platelet numbers, despite an increase in the production of megakaryocytes.

Conclusions. Collectively, these results reveal that gp130-mediated STAT1/3 activation is required to maintain the normal balance of hematopoietic progenitors during fetal and adult hematopoiesis. Furthermore, they suggest two distinct roles for gp130-mediated STAT1/3 activation in hematopoiesis, one restricting the production of immature hematopoietic progenitor cells and the other promoting the functional maturation of megakaryocytes to produce platelets. (C) 2002 International Society for Experimental Hematology. Published by Elsevier Science Inc.

2/7/64 (Item 7 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

10752399 Genuine Article#: 565GA Number of References: 27
Title: The epistatic interrelationships of IL-1, IL-1 receptor antagonist, and the type IIL-1 receptor
Author(s): Irikura VM; Lagraoui M; Hirsh D (REPRINT)
Corporate Source: Columbia Univ,Coll Phys & Surg, Dept Biochem & Mol Biophys,630 W 168th St/New York//NY/10032 (REPRINT); Columbia Univ,Coll Phys & Surg, Dept Biochem & Mol Biophys,New York//NY/10032
Journal: JOURNAL OF IMMUNOLOGY, 2002, V169, N1 (JUL 1), P393-398
ISSN: 0022-1767 Publication date: 20020701
Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA
Language: English Document Type: ARTICLE
Abstract: Mice lacking the gene for the IL-1R antagonist (IL-1ra) show abnormal development and homeostasis as well as altered responses to infectious and inflammatory stimuli. A reduction in the level of IL-1 signaling, either by deletion of the receptor or increased expression of IL-1ra, does not affect development or homeostasis, but does alter immune responses. In this study we use genetic epistasis to investigate the interdependence of selected genes in the IL-1 family in the regulation of these developmental and immunological processes. Deletion of the gene encoding the type I IL-1R (IL-1RI) is epistatic to deletion of the IL-1ra gene. Therefore, all functions of IL-1ra depend upon the presence of a functional receptor; there is no other target. Similarly, overexpression of the mRNA encoding the secreted form of IL-1ra is epistatic to deletion of the receptor antagonist, leaving the role of the intracellular splice variants of IL-1ra unknown. The abnormal development of IL-1ra-deficient mice is probably due to chronic overstimulation of the proinflammatory pathway via IL-1, but a clear single pathological defect is not apparent. These results support the model that the only essential function of IL-1ra in both health and disease is competitive inhibition of the IL-1RI.

2/7/65 (Item 8 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

09723070 Genuine Article#: 441NP Number of References: 60
Title: Interferon beta 1a treatment modulates T(H)1 expression in gamma delta plus T cells from relapsing-remitting multiple sclerosis patients
Author(s): Elliott CL; Ei-Touny SY; Filipi ML; Healey KM; Leuschen MP (REPRINT)
Corporate Source: Dept Cell Biol & Anat,981205 Nebraska Med Ctr/Omaha//NE/68198 (REPRINT); Dept Cell Biol & Anat,Omaha//NE/68198; Dept Internal Med,Neurol Sect,Omaha//NE/68198
Journal: JOURNAL OF CLINICAL IMMUNOLOGY, 2001, V21, N3 (MAY), P200-209
ISSN: 0271-9142 Publication date: 20010500
Publisher: KLUWER ACADEMIC/PLENUM PUBL, 233 SPRING ST, NEW YORK, NY 10013
USA

Language: English Document Type: ARTICLE
Abstract: A paradigm exists that multiple sclerosis is causally related to dysregulation of T(H)1 inflammatory cytokines and T(H)2 antiinflammatory cytokines. The cytokine source(s) that initiate the imbalances are unknown. In this study, gamma delta, CD4, and CD8 T cell receptor-positive (TCR+) cells were isolated from the blood of 26 definitive relapsing-remitting multiple sclerosis patients prior to interferon beta -1a (IFN beta 1a) therapy and following 8-10 weeks of this therapy. The bioactivities of interferon gamma (IFN gamma), interleukin 10 (IL10), and interleukin 12 (IL12) were determined. The concentrations of IFN gamma, IL10, and IL12 from each cell type did not change significantly with IFN beta 1a treatment. The IL10 secreted by ya TCR+ cells strongly correlated with the IL12 secreted by the same ya TCR+ cells, supporting the paradigm. Furthermore, IFN beta 1a therapy decreased the gamma delta TCR+ cell secretion of T(H)1 cytokines after 8-10 weeks of therapy.

2/7/66 (Item 9 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

08005917 Genuine Article#: 235LE Number of References: 44
Title: Increased levels of alternatively spliced %interleukin% 4 (IL-4 %delta% 2) transcripts in peripheral blood mononuclear cells from patients with systemic sclerosis
Author(s): Sakkas LI; Tourtellotte C; Berney S; Myers AR; Platsoucas CD (REPRINT)
Corporate Source: TEMPLE UNIV,SCH MED, DEPT MICROBIOL & IMMUNOL, 3400 N BROAD ST/PHILADELPHIA//PA/19140 (REPRINT); TEMPLE UNIV,SCH MED, DEPT MICROBIOL & IMMUNOL/PHILADELPHIA//PA/19140; TEMPLE UNIV,SCH MED, DEPT MED, RHEUMATOL SECT/PHILADELPHIA//PA/19140
Journal: CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, 1999, V6, N5 (SEP), P660-664
ISSN: 1071-412X Publication date: 19990900
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171
Language: English Document Type: ARTICLE
Abstract: Recent in vitro studies have shown that interleukin 4 (IL-4) induces and gamma interferon (IFN-gamma) inhibits collagen production. To define the TH1 (IFN-gamma) and TH2(IL-4) cytokine profiles in systemic sclerosis (Sscl), a disease characterized by widespread fibrosis, we investigated IL-4 and IFN-gamma transcripts in peripheral blood mononuclear cells and plasma protein levels in 13 patients with Sscl. Two previously identified IL-4 transcripts, a full-length transcript and an alternatively spliced (truncated) transcript (designated IL-4 delta 2), were identified in patients and normal controls. Significantly increased levels of total IL-4 transcripts (full-length plus IL-4 delta 2 transcripts) were found in patients with Sscl in comparison to those found in healthy controls ($P = 0.003$), and this increase was primarily due to an increase in the level of the alternatively spliced IL-4 delta 2 form. The IL-4 delta 2/full-length-IL-4 transcript ratio was significantly increased in Sscl patients ($P < 0.0001$, versus healthy controls). Sequencing analysis revealed that the frequency of IL 4 clones carrying the IL-4 delta 2 transcript was also substantially increased in patients with Sscl. Plasma IL-4 protein levels were increased in Sscl patients compared to those in healthy controls ($P = 0.001$) and correlated with total IL-4 transcript levels. The up-regulation of the fibrogenic IL-4 (a TH2 cytokine) in Sscl suggests a pathogenic role for IL-4 in this disease.

2/7/67 (Item 10 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

07612180 Genuine Article#: 188EA Number of References: 43
Title: Molecular and functional characterization of chicken IL-15
Author(s): Choi KD; Lillehoj HS (REPRINT) ; Song KD; Han JY
Corporate Source: USDA,IMMUNOL DIS RESISTANCE LAB, INST LIVESTOCK & POULTRY SCI, BLDG 1040, BARC-E/BELTSVILLE//MD/20705 (REPRINT); USDA,IMMUNOL DIS RESISTANCE LAB, INST LIVESTOCK & POULTRY SCI/BELTSVILLE//MD/20705; SEOUL NATL UNIV,COLL AGR & LIFE SCI, DEPT ANIM SCI & TECHNOL/SUWON 441744//SOUTH KOREA/
Journal: DEVELOPMENTAL AND COMPARATIVE IMMUNOLOGY, 1999, V23, N2 (MAR-APR), P165-177
ISSN: 0145-305X Publication date: 19990300
Publisher: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND
Language: English Document Type: ARTICLE
Abstract: A cDNA encoding chicken interleukin-15 was cloned from a CD4(+) T cell hybridoma expression library by screening with a rabbit antibody against a protein fraction of conditioned medium containing T cell growth promoting activity. The chicken IL-15 cDNA contains an open reading frame of 143 amino acids with a single potential N-linked glycosylation site. The predicted m.w. of the encoded protein (16 kDa) matched the size of an immunoreactive band on Western blots of E. coli expressing the recombinant IL-15. Amino acid and nucleotide sequence analyses of chicken IL-15 revealed 31% and 46% identity with bovine IL-15 respectively and lesser homologies to other mammalian IL-15s. Chicken IL-15 contained all 4 highly conserved cysteine residues present in mammalian IL-15 sequences. RT-PCR demonstrated that the chicken IL-15 gene is expressed in many tissues including spleen, intestine, and muscle and in established macrophage. T lymphoma and fibroblast cell lines. Activation of spleen cells with Con A enhanced the expression of IL-15 gene transcripts in a time-dependent manner. CHO-KI cells transfected with the chicken IL-15 cDNA secreted a biologically active protein supporting the growth of Con A activated spleen lymphocytes. Continuous culture of spleen Con A lymphoblasts with chicken IL-15 over two months resulted in an enriched T lymphocyte population expressing the gamma delta TCR, CD8 alpha, and CD3 cell surface antigens. Published by Elsevier Science Ltd.

2/7/68 (Item 11 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

07310970 Genuine Article#: 148XV Number of References: 31
Title: The effects of interleukin-15 on human gamma delta T cell responses to Plasmodium falciparum in vitro
Author(s): Elloso MM; Wallace M; Manning DD; Weidanz WP (REPRINT)
Corporate Source: UNIV WISCONSIN,SCH MED, DEPT MED MICROBIOL & IMMUNOL, 1300 UNIV AVE/MADISON//WI/53706 (REPRINT); UNIV WISCONSIN,SCH MED, DEPT MED MICROBIOL & IMMUNOL/MADISON//WI/53706; UNIV PENN,SCH VET MED, DEPT PATHOBIOL/PHILADELPHIA//PA/19104; UNIV WISCONSIN,SCH MED, DEPT PATHOL & LAB MED/MADISON//WI/53706
Journal: IMMUNOLOGY LETTERS, 1998, V64, N2-3 (DEC), P125-132
ISSN: 0165-2478 Publication date: 19981200
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS
Language: English Document Type: ARTICLE
Abstract: We observed that the gamma delta T cell subset expands when human peripheral blood mononuclear cells (PBMC) from malaria-naive donors are cultured with Plasmodium falciparum lysate in the presence of IL-2 or IL-15, cytokines that utilize two common IL-2 receptor subunits. IL-15 induced the expansion of the gamma delta T cell subset at all levels tested, whereas IL-2 was not stimulatory at high levels. Flow cytometric analysis of apoptosis using the TUNEL assay indicated that the percentage and absolute number of gamma delta T cells undergoing apoptosis were greater in cultures stimulated with antigen and IL-2

than in cultures stimulated with either antigen and IL-15 or control erythrocyte lysate and IL-2. The ability of IL-15 to enhance yb T cell function was also assessed; the results suggest that IL-15 can function with IL-2 to enhance the capacity of gamma delta T cells to inhibit parasite replication. Together these data indicate that IL-2 and IL-15, which both bind to IL-2R(beta) and IL-2R(gamma c), enhance gamma delta T cell function, but they appear to have different effects on proliferation and survival. (C) 1998 Elsevier Science B.V. All rights reserved.

2/7/69 (Item 12 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

06015632 Genuine Article#: XP564 Number of References: 17
Title: %Interleukin% 2 and gamma/%delta% T-cell receptors in peripheral blood of patients with chronic hepatitis C virus infection
Author(s): Kakumu S (REPRINT) ; Ishikawa T; Okumura A; Yoshioka K
Corporate Source: AICHI MED UNIV,DEPT INTERNAL MED 1, 21 KARIMATE YAZAKO/NAGAKUTE/AICHI 48011/JAPAN/ (REPRINT); NAGOYA UNIV,SCH MED,DEPT
INTERNAL MED 3/NAGOYA/AICHI 466/JAPAN/
Journal: HEPATOLOGY RESEARCH, 1997, V7, N2 (JUN), P83-93
ISSN: 0928-4346 Publication date: 19970600
Publisher: ELSEVIER SCI IRELAND LTD, CUSTOMER RELATIONS MANAGER, BANK HOUSE, 15,
SHANNON INDUSTRIAL ESTATE CO, CLARE, IRELAND
Language: English Document Type: ARTICLE
Abstract: Studies were conducted to determine if CD3 (T-cell) associated antigen receptors (R) such as interleukin 2 (IL-2) and gamma delta participate in the pathogenesis of hepatitis C virus (HCV) infection. Peripheral blood T-cells bearing IL-2R alpha (CD25) or beta (CD122) chain, and alpha beta or gamma delta were examined using two-color flow cytometry in 92 patients with various chronic HCV infection. CD25-positive T-cells were increased with the progression of the disease; patients with hepatocellular carcinoma (HCC) had the highest percentage of CD25 + T-cells, while CD122 + T-cells were significantly higher in asymptomatic HCV carriers with normal serum ALT levels and mild to moderate chronic hepatitis. In HCC patients, a decrease in CD25 + cells and increase in CD122 + cells were noted after hepatic resection or percutaneous ethanol injection. Asymptomatic carriers had higher gamma delta T-cells than in controls, and patients with chronic liver disease. The percentage of gamma delta T-cells became higher during IFN treatment in responders compared with nonresponders. The absolute number of T-cells studied here showed comparable results to those expressed as percentage in each patient group. There was no correlation between serum ALT values, HCV RNA levels, and the incidence of T-cell subsets. The findings suggest that IL-2R alpha beta chains on T-cells and gamma delta T-cell are associated with the pathogenesis of chronic HCV infection. (C) 1997 Elsevier Science Ireland Ltd.

2/7/70 (Item 13 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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05514744 Genuine Article#: WD562 Number of References: 35
Title: A gamma delta T cell specific surface receptor (WC1) signaling G0/G1 cell cycle arrest
Author(s): Takamatsu HH (REPRINT) ; Kirkham PA; Michael R; Parkhouse E
Corporate Source: AFRC,INST ANIM HLTH, PIRBRIGHT LAB, DEPT IMMUNOL, ASH RD/WOKING GU24 0NF/SURREY/ENGLAND/ (REPRINT)
Journal: EUROPEAN JOURNAL OF IMMUNOLOGY, 1997, V27, N1 (JAN), P105-110
ISSN: 0014-2980 Publication date: 19970100
Publisher: VCH PUBLISHERS INC, 303 NW 12TH AVE, DEERFIELD BEACH, FL 33442-1788
Language: English Document Type: ARTICLE
Abstract: Three monoclonal antibodies (mAb; SC-6, SC-12, and SC-29) reactive with the gamma delta T cell-restricted antigen WC1 were obtained immunizing mice with an ovine interleukin (IL)-2-dependent gamma delta T cell line. These mAb strongly inhibited DNA synthesis in IL-2-dependent gamma delta T cell lines with cell cycle arrest in G0/G1 phase, but did not induce apoptosis. ThemAb-induced growth arrest was reversible, either by removing the mAb or byco-culture with mitogen or anti-CD3 in the presence of IL-2. In contrast, addition of phorbol ester, ionomycin and IL-2 had no effect on the mAb-induced growth arrest. The observations define a biologically important role for the cell surface molecule WC1 in the regulation of gamma delta T cell proliferation and also provide a suitable system to study the relevant signal transduction events.

2/7/71 (Item 14 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

05389905 Genuine Article#: VV272 Number of References: 41
Title: LOW-MOLECULAR-WEIGHT PROTEIN LIGANDS FROM ONCHOCERCA VOLVULUSPREFERENTIALLY STIMULATE THE HUMAN GAMMA-DELTA T-CELL V-DELTA-1(+) SUBSET
Author(s): MUNK ME; SCHOEL B; ANDING P; BRATTIG NW; KAUFMANN SHE
Corporate Source: HUMBOLDT UNIV BERLIN,CHARITE UNIV HOSP,DEPT MED3,SCHUMANNSTR 20-21/D-10117 BERLIN//GERMANY/; UNIV ULM,DEPT IMMUNOL/D-7900 ULM//GERMANY/; BERNHARD NOCHT INST TROP MED/HAMBURG//GERMANY/; MAX PLANCK INST INFECT BIOL/BERLIN//GERMANY/
Journal: JOURNAL OF INFECTIOUS DISEASES, 1996, V174, N6 (DEC), P1309-1315
ISSN: 0022-1899
Language: ENGLISH Document Type: ARTICLE
Abstract: Onchocerciasis is a chronic infectious disease caused by the filarial nematode Onchocerca volvulus. A minor population of human gamma delta T cells expressing V delta 1 chains is preferentially stimulated by O. volvulus ligands in vitro. Therefore, the nature of the parasite ligand and the effector functions of V delta 1(+) T cells stimulated by O. volvulus was investigated. A 5- to 30-kDa ligand from the adult parasite lysate that is sensitive to proteinase treatment was identified, Presentation for preferential stimulation of V delta 1(+) T cells required processing, After in vitro stimulation with O. volvulus in the presence of %interleukin%-2, V %delta% 1(+) T cells produced interferon-gamma but not interleukin-4 and exhibited NK cytolytic activities. It is concluded that somatic 5- to 30-kDa protein ligands from O. volvulus stimulate V delta 1(+) T cells and that V delta 1(+) T cells play a role in immunity to O. volvulus.

2/7/72 (Item 15 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

04817266 Genuine Article#: UJ768 Number of References: 28
Title: INTERLEUKIN-5 MESSENGER-RNA EXPRESSED BY EOSINOPHILS AND GAMMA/DELTA
T-CELLS IN PARASITE-IMMUNE SHEEP
Author(s): BAO SS; MCCLURE SJ; EMERY DL; HUSBAND AJ
Corporate Source: UNIV SYDNEY,DEPT VET PATHOL B12/SYDNEY/NSW 2006/AUSTRALIA/; UNIV SYDNEY,DEPT VET PATHOL B12/SYDNEY/NSW 2006/AUSTRALIA/; CSIRO,DIV ANIM PROD,MCMASTER LAB/PROSPECT//AUSTRALIA/
Journal: EUROPEAN JOURNAL OF IMMUNOLOGY, 1996, V26, N3 (MAR), P552-556
ISSN: 0014-2980
Language: ENGLISH Document Type: ARTICLE
Abstract: Interleukin (IL)-5 is produced by a variety of cell types and contributes to both lymphocyte development and eosinophil terminal differentiation in vitro. The coincidence of worm expulsion and eosinophilia in sheep infected with the gastrointestinal nematode Trichostrongylus colubriformis suggests that eosinophils may be involved as effector cells in host immunity against parasite infection. The role of IL-5 in this process was investigated by observing the distribution of IL-5 mRNA(+) cells in the small intestine, mesenteric

lymph nodes (MLN) and Peyer's parches (PP) by an in situ hybridization technique using a murine IL-5 riboprobe. IL-5 mRNA(+) cells were distributed throughout the lamina propria (LP) of the small intestine from the tips of the villi to the muscularis mucosae and in the parafollicular areas of MLN and PP in both naive and immune sheep. The phenotypes of IL-5 mRNA(+) cells was explored by simultaneous eosin and immunohistochemical staining using a monoclonal antibody recognizing the T19 marker. which identifies a major subset of gamma/delta TCR(-) cells in sheep. In immune sheep. there was about a five-fold increase in the number of eosinophils and IL-5 mRNA(-) cells in the LP, but there was no significant change in numbers of T19(-) cells. Most of the IL-5 mRNA(-) cells in the LP were eosinophils, but many of the T19 cells also expressed IL-5 mRNA. In contrast, there were fewer eosinophils than T19(-) cells in MLN of immune sheep and, compared to controls, a three-fold increase in T19(+) cells and a five-fold increase in T19(-)/IL-5 mRNA(-) double-positive cells was observed in immune sheep. In PP, there were very few eosinophils but substantial numbers of T19(+) cells; however, no significant differences in numbers of eosinophils, T19(+) or IL-5 mRNA(-) cells were observed between control and immune sheep. These results indicate that in sheep, both eosinophils and gamma/delta T cells are capable of IL-5 expression and suggest that IL-5 is an important regulatory factor in autocrine and paracrine activation of effector cells involved in parasite immune expulsion.

2/7/73 (Item 16 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

02886196 Genuine Article#: ML973 Number of References: 37
Title: B-CELL HYPERACTIVITY IS A FUNCTION OF T-CELL DERIVED CYTOKINES IN SYSTEMIC LUPUS-ERYTHEMATOSUS
Author(s): ALJANADI M; RAZIUDDIN S
Corporate Source: KING SAUD UNIV,COLL MED,DEPT INTERNAL MED RHEUMATOL,POB 641/ABHA//SAUDI ARABIA/; KING SAUD UNIV,COLL MED,DEPT CLIN IMMUNOL/ABHA//SAUDI ARABIA/; ASIR CENT HOSP/ABHA//SAUDI ARABIA/
Journal: JOURNAL OF RHEUMATOLOGY, 1993, V20, N11 (NOV), P1885-1891
ISSN: 0315-162X
Language: ENGLISH Document Type: ARTICLE
Abstract: Objective. T cell abnormalities and abnormal production of cytokines is a key event of B cell hyperactivity and antibody synthesis in systemic lupus erythematosus (SLE). We investigated T cell function and role of interleukin 4 (IL4) and IL-6 in B cell induced Ig synthesis from SLE. Methods. Phenotypes and expression of activation antigens on T cells and monocytes was determined by specific monoclonal antibodies using indirect immunofluorescence technique. IL-4, IL-6 and tumor necrosis factor-alpha (TNF alpha) assays and in vitro Ig synthesis was carried out by enzyme linked immunosorbent assays. Results. CD25, CD38 and CD71 expressing T cells and monocytes were increased in circulation of patients with SLE. Patients with SLE associated with prominent clinical presentation like lymphadenopathy had a higher percentage of gamma delta T cells in blood. CD4 + CD29 + T cell subsets, which were the major T cells secreting IL-6, were increased in the circulation and provide effective helper function to B cells in their enhanced in vitro Ig synthesis in SLE. Conclusion. Our results demonstrate that CD4+CD29+ T cell subsets produced elevated levels of IL-6 in SLE and that IL-6 overproduction may contribute to the B cell hyperactivity in enhanced antibody synthesis characteristic of this autoimmune disease.

2/7/74 (Item 17 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2006 Inst for Sci Info. All rts. reserv.

02141129 Genuine Article#: KE757 Number of References: 45
Title: CYTOKINE SYNTHESIS BY INTESTINAL INTRAEPITHELIAL LYMPHOCYTES - BOTH GAMMA/DELTA-T-CELL RECEPTOR-POSITIVE AND ALPHA/BETA-T-CELL RECEPTOR-POSITIVE T-CELLS IN THE G(1)-PHASE OF CELL-CYCLE PRODUCE IFN-GAMMA AND IL-5
Author(s): YAMAMOTO M; FUJIHASHI K; BEAGLEY KW; MCGHEE JR; KIYONO H
Corporate Source: UNIV ALABAMA,DEPT ORAL BIOL,BHS 392,UAB STN/BIRMINGHAM//AL/35294; UNIV ALABAMA,DEPT ORAL BIOL,BHS 392,UAB STN/BIRMINGHAM//AL/35294; UNIV ALABAMA,DEPT MED/BIRMINGHAM//AL/35294; UNIV ALABAMA,CTR IMMUNOBIOL VACCINE/BIRMINGHAM//AL/35294; UNIV ALABAMA,DEPT MICROBIOL/BIRMINGHAM//AL/35294
Journal: JOURNAL OF IMMUNOLOGY, 1993, V150, N1 (JAN 1), P106-114
ISSN: 0022-1767
Language: ENGLISH Document Type: ARTICLE
Abstract: Murine intestinal intraepithelial lymphocytes (IEL) have been shown to contain subsets of alpha/beta TCR+ and gamma/delta TCR+ T cells that spontaneously produce cytokines such as IFN-gamma and IL-5. We have now determined the nature and cell cycle stage of these cytokine-producing T lymphocytes in IEL by using IFN-gamma and IL-5-specific ELISPOT assay, cytokine-specific mRNA-cDNA dot-blot hybridization and polymerase chain reaction, and flow cytometry (FACS) for DNA analysis. When CD3+ T cells from IEL of normal C3H/HeN mice were separated into low and high density fractions by discontinuous Percoll gradients, IFN-gamma and IL-5 spot-forming cells were only found in the former population. Analysis of MRNA for these cytokines by both IFN-gamma and IL-5-specific dot-blot hybridization and polymerase chain reaction revealed that higher levels of message for IFN-gamma and IL-5 were also seen in the low density fraction. However, cell cycle analysis of these two fractions by FACS using propidium iodide showed a similar pattern of cell cycle stages in both low and high density populations (G0 + G1 approximately 96 to 98% and S/G2 + M approximately 2 to 4%). Finally, mRNA from gamma/delta TCR+ and alpha/beta TCR+ T cells in both low and high density fractions of IEL were analyzed for IFN-gamma and IL-5 message by polymerase chain reaction. After 35 cycles of amplification, both gamma/delta TCR+ and alpha/beta TCR+ T cells in the low density fraction expressed higher levels of message for these two cytokines when compared with the high density population. These results have now shown that both gamma/delta and alpha/beta TCR+ IEL can be separated into low and high density subsets and both fractions possess a similar stage of cell cycle. However, only the low density cells (in G1 phase) of both gamma/delta and alpha/beta TCR types possess increased cytokine-specific mRNA and produce the cytokines IFN-gamma and IL-5. Our results suggest that alpha/beta TCR+ and gamma/delta TCR+ IEL can produce cytokines without cell proliferation.

2/7/75 (Item 18 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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00237701 Genuine Article#: CZ244 Number of References: 0
Title: RELEASE OF %INTERLEUKIN%-%DELTA% NEUTROPHIL ACTIVATING PEPTIDE BY HUMAN GLOMERULAR MESANGIAL CELLS EXPOSED TO INFLAMMATORY CYTOKINES
Author(s): KUSNER DJ; KING CH; SEDOR JR
Corporate Source: CASE WESTERN RESERVE UNIV,DEPT MED/CLEVELAND//OH/44106
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Language: ENGLISH Document Type: MEETING ABSTRACT

2/7/76 (Item 1 from file: 71)
DIALOG(R)File 71:ELSEVIER BIOBASE
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03015315 2005171618
The molecular mechanism of human resistance to HIV-1 infectionin persistently infected individuals - A review, hypothesis and implications
Becker Y.
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Journal: Virus Genes, 31/1 (113-120), 2005, Netherlands
CODEN: VIGEE
ISSN: 0920-8569
DOCUMENT TYPE: Review
LANGUAGES: English SUMMARY LANGUAGES: English
NO. OF REFERENCES: 36

Resistance to HIV-1 infection in Europeans is associated with a mutation in the gene that codes for the CCR5 protein that is present in Th2 cells and serves as a coreceptor for HIV-1 R5 strain. A deletion of 32 amino acids from the cytokine receptor prevents infection. This mutation prevails in Europeans and is absent in Africans. However, duplication of a gene that codes for a chemokine that binds to the CCR5 was discovered in Africans (mean gene copy 6 while in non-Africans the mean gene copy is 3). Higher expression of these genes protects T cells against HIV-1 infection in vitro. It should be noted that resistance to HIV-1 R5 variant does not protect against HIV-1 R4 variant. It was reported that a minority of highly HIV-1 exposed African professional sex workers (APSW) were resistant to the virus infection during a 10 years period. Recently, the analysis of the cytokines in the serum of the persistently infected seronegative women revealed that the latter hypo-expresses the cytokine IL-4. Since the molecular events during HIV-1 infection are associated with a marked increase in the levels of IL-4 and IgE in the sera of the infected individuals, it suggests that AIDS is an allergy. Thus, a very low level of IL-4 production may abrogate the virus infection. Studies on the human IL-4 gene revealed that together with the IL-4 mRNA a spliced variant with a deletion of exon 2 is synthesized. The latter is a natural antagonist of IL-4 and when expressed in an individual at a level higher than IL-4, the person will resist a microbial infection (e.g. Mycobacterium tuberculosis) or asthma. The present hypothesis suggests that the HIV-1 resistant APSWs produce more IL-4 delta 2 molecules than IL-4 molecules. The binding of IL-4 delta 2 to IL-4 receptors on T and B cells prevents their functions and the infection by HIV-1. The implications of these studies are that treatment of HIV-1 infected people with drugs that will block the IL-4 receptors will stop HIV-1 infections and the determination of the levels of IL-4 and IL-4 delta 2 in the sera of HIV-1+ patients will enable to identify the individuals that have a natural resistance to HIV-I/AIDS and those who need treatments. (c) 2005 Springer Science+Business Media, Inc.

2/7/7 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
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13119346 EMBASE No: 2005182889
Immunosuppressive cytokine interleukin-10 mRNA expression correlates with tumour progression in oral squamous cell carcinoma
Suzuki K.; Kubota E.; Shimizu S.; Ozawa S.; Imamura H.; Goto M.; Katsuki T.
E. Kubota, Dept. of Oral and Maxillofac. Surg., Kanagawa Denial College, 82 Inaoka-cho, Yokosuka, Kanagawa, 238-8580 Japan
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Asian Journal of Oral and Maxillofacial Surgery (ASIAN J. ORAL. MAXILLOFAC. SURG.) (Japan) 2005, 17/1 (11-19)
CODEN: AJMSF ISSN: 0915-6992
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 32

Objective: To examine the correlation between immunosuppressive cytokine interleukin-10 mRNA expression and clinicopathological characteristics of patients with oral squamous cell carcinoma. Patients and Methods: Expression of interleukin-10 mRNA in tissues taken from 34 patients with oral squamous cell carcinoma was examined by reverse transcription-polymerase chain reaction and immunohistochemical analysis. Results: The cDNA encoding for T-lymphocyte receptor complex, CD3-delta, was amplified in all samples, indicating the presence of tumour infiltrating lymphocytes. Interleukin-10 mRNA was detected in 21 of 34 samples (61.8%). Densitometric analysis of the cDNA bands demonstrated that the ratio ofCD3-oto control beta-actin was significantly lower in patients with advanced-stage carcinoma compared with those with early-stage disease (p = 0.047). However, the ratio of %interleukin%-10.to CD3-%delta% was significantly higher in the advanced stages than in the early stages (p = 0.012). Conclusions: These results suggest that tumour infiltrating lymphocytes decrease with progression of the tumour, whereas interleukin-10 expression remains constant around the tumour. These data also suggest that interleukin-10 may be produced not only by T cells but also by tumour cells. (c) 2005 Asian Association of Oral and Maxillofacial Surgeons.

2/7/8 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE
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12741896 EMBASE No: 2004337063
Why study transport of peptides and proteins at the neurovascular interface
Pan W.; Kastin A.J.
W. Pan, Pennington Biomed. Research Center, 6400 Perkins Road, Baton Rouge, LA United States
AUTHOR EMAIL: weihong.pan@pbrc.edu
Brain Research Reviews (BRAIN RES. REV.) (Netherlands) 2004, 46/1 (32-43)
CODEN: BRERD ISSN: 0165-0173
PUBLISHER ITEM IDENTIFIER: S0165017304000542
DOCUMENT TYPE: Journal ; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 174

The blood-brain barrier (BBB) is an immense neurovascular interface. In neurodegenerative, ischemic, and traumatic disorders of the central nervous system (CNS), the BBB may hinder the delivery of many therapeutic peptides and proteins to the brain and spinal cord. Fortunately, the mistaken dogma that peptides and proteins do not cross the BBB has been corrected during the past two decades by the accumulating evidence that peptides and proteins in the periphery exert potent effects in the CNS. Not only can peptides and proteins serve as carriers for selective therapeutic agents, but they themselves may directly cross the BBB after delivery into the bloodstream. Their passage may be mediated by simple diffusion or specific transport, both of which can be affected by interactions in the blood compartment (outside the BBB) and within the endothelial cells (at the BBB level). Although the majority of current delivery strategies focuses on modification of the molecule to be delivered, understanding the mechanisms of transport will eventually facilitate regulation of the BBB directly. We review the different aspects of interactions and discuss recent advances in the cell biology of peptide/protein transport across the BBB. Better understanding of the nature and regulation of the transport systems at the BBB will provide a new direction to enhance the interactions of peripheral peptides and proteins with the CNS. (c) 2004 Elsevier B.V. All rights reserved.

2/7/9 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE
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12258109 EMBASE No: 2003367982
Structural and functional properties of IL-4sigma2, an alternative splice variant of human IL-4
Vasiliev A.M.; Vasilenko R.N.; Kulikova N.L.; Andreev S.M.; Chikileva I.O.; Puchkova G.Yu.; Kosarev I.V.; Khodyakova A.V.; Khlebnikov V.S.; Ptitsyn L.R.; Shcherbakov G.Ya.; Uversky V.N.; DuBuske L.M.; Abramov V.M.
V.N. Uversky, Dept. of Chemistry and Biochemistry, University of California, Santa Cruz, Santa Cruz, CA 95064 Russian Federation
AUTHOR EMAIL: uversky@hydrogen.ucsc.edu
Journal of Proteome Research (J. PROTEOME RES.) (United States) 2003 , 2/3 (273-281)
CODEN: JPROB ISSN: 1535-3893

DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 70

Structural and functional properties of recombinant IL-4sigma2, a naturally occurring splice variant of human IL-4 with a deletion of the loop region 22-37, have been analyzed. IL-4sigma2 has alpha-helical structure and most likely preserves the "up-up-down-down" topology typical of the four-helix-bundle cytokines. IL-4sigma2 interacts specifically with the chain of IL-4R and competes effectively with IL-4 for the common binding sites. Thus, IL-4sigma2 may act as a regulator of the cytokine net, being the natural antagonist of IL-4.

2/7/80 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.
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0311785 DBR Accession No.: 2003-12925 PATENT
New interleukin (IL)-1delta or IL-1epsilon polypeptide, useful for diagnosing and/or treating immune disorders, hematological disorders, cancer, infectious diseases or inflammation, and as an immunogen - recombinant protein production and antagonist and agonist for use in disease therapy and gene therapy
AUTHOR: HEDRICK J A; SANA T R; BAZAN J F; KASTELEIN R A
PATENT ASSIGNEE: HEDRICK J A; SANA T R; BAZAN J F; KASTELEIN R A 2002
PATENT NUMBER: US 20020164332 PATENT DATE: 20021107 WPI ACCESSION NO.:
2003-298683 (200329)
PRIORITY APPLIC. NO.: US 770528 APPLIC. DATE: 20010125
NATIONAL APPLIC. NO.: US 770528 APPLIC. DATE: 20010125
LANGUAGE: English
ABSTRACT: DERWENT ABSTRACT: NOVELTY - An isolated or recombinant polypeptide that specifically binds polyclonal antibodies generated against a 12 consecutive amino acid segment of a 156 (S1), 164 (S2), 171 (S3) or 172 (S4) amino acid sequence, given in the specification, and comprising at least one or more sequence(s) selected (I), is new. DETAILED DESCRIPTION - An isolated or recombinant polypeptide that specifically binds polyclonal antibodies generated against a 12 consecutive amino acid segment of a 156 (S1), 164 (S2), 171 (S3) or 172 (S4) amino acid sequence, given in the specification, and comprising at least one or more sequence(s) selected (I), is new. (I) comprises one of 50 3-10 residue amino acid sequences, given in the specification, e.g. LeuCysPheArgMetLysAsp; GlnLeuLeuAlaGly. INDEPENDENT CLAIMS are also included for: (1) a binding compound comprising an antigen binding site from an antibody, which specifically binds to the novel mature polypeptide; (2) a composition comprising a sterile binding compound cited above and a carrier, where the carrier is an aqueous compound, including water, saline, and/or buffer; (3) an isolated or recombinant nucleic acid which encodes the novel polypeptide, and which: (a) comprises the mature coding sequence of 470 (S5), 219 (S6), 505 (S7) or 1195 (S8) base pairs, given in the specification; (b) encodes one or more antigenic peptide sequence(s) of S1-4; (c) exhibits identity to a natural cDNA encoding the segment; (d) is an expression vector; (e) further comprises an origin of replication; (f) is from a natural source; (g) comprises a detectable label; (h) comprises synthetic nucleotide sequence; (i) is less than 6, preferably less than 3 kbase; (j) is from a rodent or primate; (k) comprises a natural full-length coding sequence; (l) is a hybridization probe for a gene encoding the interleukin (IL)-1delta or IL-1epsilon; or (l) is a polymerase chain reaction (PCR) primer or product, or mutagenesis primer; (4) a cell transformed with the nucleic acid molecule; (5) kits comprising the novel polypeptide, binding compound, or nucleic acid, a compartment for the protein, nucleic acid or the binding compound, and/or instructions for use or disposal of reagents in the kit; (6) modulating a cell involved in an inflammatory response; (7) making an antiserum comprising the antibody of (1); and (8) producing an antigen:antibody complex. BIOTECHNOLOGY - Preferred Protein: The polypeptide is a mature protein that lacks a post-translational modification. It is from a rodent, including a mouse, or from a primate, including a human. It is a natural allelic variant of IL-1delta or IL-1epsilon. The polypeptide has a length of at least 30 amino acids and exhibits at least 2 non-overlapping epitopes that are specific for a rodent IL-1delta or for a rodent or primate IL-1epsilon. It also exhibits a sequence identity over a length of at least about 20 amino acids to S1, S3 or S4. The polypeptide is glycosylated and has a molecular weight of at least 10 kDa with natural glycosylation. It is a synthetic peptide attached to a solid substrate or conjugated to another chemical moiety. It is a 5-fold or less substitution from natural sequence, or is a deletion or insertion variant from a natural sequence. The soluble polypeptide comprises a sterile polypeptide and a carrier cited above. The fusion protein comprises a mature protein, a detection or purification tag (including a FLAG, His6 or immunoglobulin sequence), or a sequence of another cytokine or chemokine. Preferred Compound: The binding compound is an Fv, Fab, or Fab2 fragment that is conjugated to another chemical moiety. It is a polyclonal antibody that is raised against the above polypeptide. It is immunoselected and binds to a denatured IL-1delta or IL-1epsilon. The antibody exhibits a Kd to antigen of at least 30 micro-M, is attached to a solid substrate, including a bead or a plastic membrane, is in a sterile composition, or is detectably labeled with a radioactive or fluorescent label. Preferred Cell: The cell is a prokaryotic cell, a eukaryotic cell, a bacterial cell, a yeast cell, an insect cell, a mammalian cell, a murine cell, a primate cell, or a human cell. Preferred Nucleic Acid: The nucleic acid hybridizes under wash conditions of 40 degrees C and less than 1 M salt to S5-8 or to a sequence of 809 base pairs (S9) given in the specification. The wash conditions may be at 50 degrees C and/or 500 mM salt, or at 65 degrees C and/or 150 mM salt, where the polynucleotide exhibits identity over at least 20 or 50 nucleotides to S5-9. Preferred Method: Modulating a cell involved in an inflammatory response, comprises contacting the cell with an agonist or antagonist of a mammalian IL-1delta or IL-1epsilon polypeptide. The contacting is in combination with an agonist or antagonist of IL-1alpha, IL-1RA, IL-1beta, IL-1gamma, IL-2, and/or IL-12. The contacting is with an antagonist, including binding composition comprising an antibody binding site which specifically binds an IL-1delta or IL-1epsilon. The modulating is regulation of interferon (IFN)-gamma production. Making an antiserum comprising the above antibody comprises immunizing a mammal with an amount of the above polypeptide, thus, causing the antiserum to be produced. Producing an antigen:antibody complex comprises contacting the above protein with the antibody, thus, allowing the complex to form. Preparation: The polypeptide was prepared using standard isolation and recombinant techniques. ACTIVITY - Cytostatic; Antiinflammatory; Antirheumatic; Antiarthritic; Antibacterial; Virucide. No biological data is given. MECHANISM OF ACTION - Gene therapy. USE - The polypeptide, nucleic acid and antibody are useful in diagnosing and treating degenerative or abnormal conditions which directly or indirectly involve development, differentiation or function, e.g. of the immune system and/or hematopoietic cells, cancer, infection (e.g. bacterial or viral), and inflammation (e.g. rheumatoid arthritis). The polypeptide may also be used as an immunogen. ADMINISTRATION - Administration is by oral, rectal, nasal, topical or parenteral means (claimed). No dosage is given. EXAMPLE - No relevant examples given. (39 pages)

2/7/81 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.
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0275565 DBR Accession No.: 2001-15772 PATENT
Novel isolated or recombinant antigenic %interleukin%-1 %delta% or epsilon polypeptide useful for treating conditions exhibiting abnormal expression of interleukin such as immunological disorders, tumor and allergy - the use of human recombinant antigenic %interleukin%-1 %delta%, epsilon protein and monoclonal antibody in disease therapy
AUTHOR: Debet J E M A; Timans J C; Bazan J F; Kastelein R A
CORPORATE SOURCE: Kenilworth, NJ, USA.
PATENT ASSIGNEE: Schering 2001
PATENT NUMBER: WO 200157219 PATENT DATE: 20010809 WPI ACCESSION NO.:

2001-488886 (2053)
PRIORITY APPLIC. NO.: US 179638 APPLIC. DATE: 20000202
NATIONAL APPLIC. NO.: WO 2001US3285 APPLIC. DATE: 20010201
LANGUAGE: English
ABSTRACT: An isolated or recombinant antigenic %interleukin%-1 %delta% (IL1delta) or IL-1 epsilon protein (I) is claimed. (I) contains at least segment of 12 identical continuous amino acids from a sequence (S) of 155 or 169 amino acids fully defined or at least two distinct segments of 8 identical contiguous amino acids from (S). Also claimed are: producing (M1) a ligand:receptor complex; modulating (M2) physiology or development of an IL1R6 receptor expressing cell; modulating (M3) a signal to a cell mediated IL1delta or ILepsilon; selectively labeling (M4) a population of cells; a population of cells (II) made by M4; testing (M5) a compound for ability to affect IL-1R6 receptor-ligand interaction; an isolated or recombinant polynucleotide (III); and a binding compound (IV) containing an antigen binding portion from an antibody. (I) useful as an immunogen for the production of antisera or antibodies specific. (I) is useful as a reagent to detect any antibodies generated in response to the presence of elevated levels of expression, or immunological disorders. (I) is useful in diagnostic kits. (I) is useful for treating immunological disorders, tumor, allergy, infectious disease. (103pp)

2/7/82 (Item 3 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0244407 DBR Accession No.: 1999-12554 PATENT
Mouse and human %interleukin%-1-%delta% DNA, proteins and fragments, useful as molecular weight markers - recombinant %interleukin%-1-%delta%, useful for determining the mol.wt. and isoelectric point of a protein, and for therapy of interleukin-1-related disease
AUTHOR: Sims J E
CORPORATE SOURCE: Seattle, WA, USA.
PATENT ASSIGNEE: Immunex 1999
PATENT NUMBER: WO 9935268 PATENT DATE: 19990715 WPI ACCESSION NO.: 1999-458310 (1938)
PRIORITY APPLIC. NO.: US 87393 APPLIC. DATE: 19980601
NATIONAL APPLIC. NO.: WO 99US514 APPLIC. DATE: 19990108
LANGUAGE: English
ABSTRACT: Recombinant mouse and human %interleukin%-1-%delta% (I) and their encoding DNA sequences (II) are claimed. Also new are: (II)-specific DNA probes; (I) and (II) variants; vectors and host cells harboring (II) and the recombinant production of (I); (I)-specific antibodies; and a method and kit for determining the mol.wt. of a protein using (I). (I) is useful for determining the mol.wt. of a protein sample. (I) and its fragments (following fragmentation using e.g. Staphylococcus aureus V8 protease) are also useful as controls for peptide fragmentation and for determining the isoelectric point of a protein. (I) is further useful therapeutically for treating diseases associated with %interleukin%-1-%delta% and also for identifying diseases associated with chromosome-2 region 2q11-12, which include glaucoma, ectodermal dysplasia, insulin-dependent diabetes mellitus, wrinkly skin syndrome, T-lymphocyte leukemia or lymphoma and tibial muscular dystrophy. (72pp)

2/7/83 (Item 4 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0230857 DBR Accession No.: 99-00958 PATENT
Mammalian %interleukin%-1-%delta% and 1-epsilon - used to regulate development and the immune system, and to diagnose and treat abnormal interleukin expression
AUTHOR: Hendrick J A; Sana T R; Bazan J F; Kastelein R A
CORPORATE SOURCE: Kenilworth, NJ, USA.
PATENT ASSIGNEE: Schering-USA 1998
PATENT NUMBER: WO 9847921 PATENT DATE: 981029 WPI ACCESSION NO.: 98-609976 (9851)
PRIORITY APPLIC. NO.: US 55111 APPLIC. DATE: 970806
NATIONAL APPLIC. NO.: WO 98US6879 APPLIC. DATE: 980417
LANGUAGE: English
ABSTRACT: An isolated or recombinant protein (I) that specifically binds to antibodies (Ab) generated against a 12-consecutive amino acid segment of %interleukin% (IL)-1-%delta% (IL1d) or IL-1-epsilon (IL1e), is claimed. (I) has a sequence, selected from the given protein sequences. Also claimed is a binding compound with an antigen-binding site from an Ab that specifically bind to a mature (I). The claims also cover an isolated or recombinant nucleic acid encoding (I), a peptide, fusion protein, or nucleic acid that hybridizes to (I), and a cell transformed by the nucleic acid. Agonists and antagonists of (I) are used to regulate cells involved with an inflammatory response. (I) are used to produce Ab and antigen-Ab complexes. (I), the Ab, and corresponding nucleic acids are used to regulate development and the immune system, and can be used to diagnose and treat conditions that arise from abnormal IL expression. (I) is preferably IL1d or IL1e. The 12 amino acid segment used to generate Ab is selected from one of 8 and 7 given sequences for IL1d and IL1e respectively. (111pp)

2/7/84 (Item 5 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0230786 DBR Accession No.: 99-00887 PATENT
New IL-1-delta polypeptide and polynucleotide - vector expression in host cell, antibody, agonist, antagonist e.g. antisense nucleic acid and DNA probe, used for disease e.g. cancer diagnosis, therapy, gene therapy or recombinant vaccine
AUTHOR: Young P R; James I E; Connor J R
CORPORATE SOURCE: Philadelphia, PA, USA.
PATENT ASSIGNEE: SK-Beecham 1998
PATENT NUMBER: EP 879889 PATENT DATE: 981125 WPI ACCESSION NO.: 98-596881 (9851)
PRIORITY APPLIC. NO.: US 939300 APPLIC. DATE: 970929
NATIONAL APPLIC. NO.: EP 98301169 APPLIC. DATE: 980217
LANGUAGE: English
ABSTRACT: A new %interleukin%-1-%delta% has a 164 amino acid protein sequence. Also new are: a DNA sequence encoding the protein and cDNA; an expression system containing the DNA; a host cell containing the expression system; an antibody specific for the protein; agonists and antagonists to the protein; and methods for inhibiting expression of the new protein by administering an antagonist, antisense nucleic acid, or a protein that competes with the new protein for its ligand.. The new protein and DNA may be used to diagnose susceptibility to a disease such as inflammation, arthritis, septicemia, autoimmune disease, transplant rejection, graft versus host disease, infection, stroke, ischemia, acute respiratory disease syndrome, restenosis, brain injury, AIDS, bone disease, Alzheimer disease or cancer, by detecting mutations in the gene using DNA probes or by detecting levels of protein expression. Agonists and antagonists may be used for therapy and the DNA may be used for gene therapy of diseases related to the new protein. Antibodies may be used to induce an immune response to immunize and prevent diseases and proteins may be administered directly in recombinant vaccines. (21pp)

2/7/85 (Item 6 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0229475 DBR Accession No.: 98-11072
A flash-type bioluminescent immunoassay that is more sensitive than radioimaging: quantitative detection of cytokine cDNA in activated and resting human cells - stimulated and unstimulated human peripheral blood mononuclear cell, cytokine cDNA assay
AUTHOR: Actor J K; Kuffner T; Dezzutti C S; Hunter R L; +McNicholl J M

CORPORATE AFFILIATE: Univ.Texas Univ.Emory U.S.Cent.Dis.Contr.Prev.Atlanta
CORPORATE SOURCE: Immunology Branch, DASTLR, NCID, CDC, MS-A25, 1600 Clifton Rd., Atlanta, GA 30333, USA. email:jkm7@cdc.gov
JOURNAL: J.Immunol.Methods (211, 1-2, 65-77) 1998
ISSN: 0022-1759 CODEN: JIMMBG
LANGUAGE: English
ABSTRACT: Because of its high sensitivity, bioluminescence (BL) is an excellent alternative to radioactive quantitation of cytokine reverse-transcriptase polymerase chain reaction derived-products. BL amplicons can be detected at cycle numbers, which cannot normally be done using radioactivity. For studies of stimulated and unstimulated cells, 1 donor specimen was leukophoresed and human peripheral blood mononuclear cells (PBMCs) were frozen (unstimulated) or stimulated by cultivation in media containing, 100 U/ml penicillin, 50 ug/ml streptomycin, 10% fetal calf serum and 2 mM L-glutamine for 8 hr. Total RNA was then extracted from these cells and used for cDNA construction. The sense primers used for the BL studies were biotinylated on the 5' terminal nucleotide; the oligonucleotides used as probes were synthesized with a 5' terminal amine group and labeled with digoxigenin-NHS. The cDNA constructed was subjected to polymerase chain reaction, using primers for %interleukin%-2 and CD3-%delta% , to generate the appropriate amplicons. The amplicons were then ligated into plasmid pT7 Blue, which was purified and quantified. (27 ref)

2/7/86 (Item 7 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0203294 DBR Accession No.: 96-14065 PATENT
New isoforms of interleukin-1-converting-enzyme - e.g. interleukin-1-beta-converting-enzyme as a new antiinflammatory, and %interleukin%-1-%delta%-converting-enzyme cDNA in degenerative disease gene therapy
AUTHOR: Litwack G; Alnemri E S; Fernandez-Alnemri T
CORPORATE SOURCE: Philadelphia, PA, USA.
PATENT ASSIGNEE: Univ.Philadelphia-Thomas-Jefferson 1996
PATENT NUMBER: WO 9625945 PATENT DATE: 960829 WPI ACCESSION NO.: 96-425081 (9642)
PRIORITY APPLIC. NO.: US 391916 APPLIC. DATE: 950221
NATIONAL APPLIC. NO.: WO 96US2187 APPLIC. DATE: 960216
LANGUAGE: English
ABSTRACT: A pure protein of a specified 383, 311, 263 or 88 amino acid protein sequence, is claimed. The 4 proteins correspond to 4 novel interleukin-1-converting-enzyme (ICE) isoforms, i.e. %interleukin% -1-beta-, -gamma-, -%delta% - and -epsilon-converting-enzyme, respectively. Also claimed are: (1) a nucleic acid with a specified 1185, 969, 825 or 300 bp DNA sequence, or fragments with at least 10 bp, especially 18-30 bp, and preferably 24 bp; (2) a recombinant expression vector containing nucleic acid encoding the protein; (3) a host cell containing the vector; (4) a recombinant expression vector containing the nucleic acid of (1); (5) a host cell containing the vector of (4); (6) an oligonucleotide complementary to at least 10 bp of the nucleic acid of (1); (7) an isolated antibody which binds to an epitope on the protein; and (8) a method for identifying inhibitors of ICE isoforms. The proteins are useful as antiinflammatory and anti-apoptotic agents. The nucleic acids are used to produce pure proteins and for the design of probes. cDNA encoding ICE-delta can be used in gene therapy to inhibit ICE activity in several degenerative diseases. (50pp)

2/7/87 (Item 8 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0188126 DBR Accession No.: 95-15641 PATENT
New human interleukin alternative splice variants - recombinant %interleukin%-2-%delta%-2 and %interleukin%-4-%delta%-2 production by vector expression in host cell, for application e.g. as an antiallergic, and in HIV virus infection therapy
AUTHOR: Alms W; White B
PATENT ASSIGNEE: Univ.Maryland-Baltimore-County 1995
PATENT NUMBER: WO 9527052 PATENT DATE: 951012 WPI ACCESSION NO.: 95-358629 (9546)
PRIORITY APPLIC. NO.: US 224010 APPLIC. DATE: 940406
NATIONAL APPLIC. NO.: WO 95US4094 APPLIC. DATE: 950330
LANGUAGE: English
ABSTRACT: The following are claimed: (1) an isolated nucleic acid composed of exons 1, 3 and 4 of human interleukin-4 (IL-4) or exons 1, 3 and 4 of human interleukin-2 (IL-2); (2) isolated nucleic acid as in (1) which is DNA or RNA, respectively; (3) an expression vector containing the above DNA; (4) a transformed cell composed of a vector as in (3); (5) a polypeptide expressed by an expression vector as in (3); and an antibody directed to a polypeptide as in (5). The polypeptide expressed by exons 1, 3 and 4 for IL-4 and Il-2 can be administered to a human to decrease the biological effects of IL-4 and IL-2, respectively. These alternative splice variants can be used as agonists or antagonists of the native cytokines. They can be used for treating conditions such as allergic reactions, infectious conditions, and for delaying the clinical transition from HIV antibody positivity to AIDS, autoimmune disorders, and fibrotic diseases. DNA encoding IL-4 delta-2 and IL-2-delta-2 were isolated by reverse transcription polymerase chain reaction amplification of RNA from human peripheral blood mononuclear cells. (61pp)

2/7/88 (Item 9 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0164153 DBR Accession No.: 94-06704
High-level expression of a biologically active human interleukin-6 mutein - recombinant interleukin-6 mutein construction by N-terminus truncation and Cys residue pair substitution with Ser; vector plasmid pKK233-2 expression in Escherichia coli
AUTHOR: Skelly S M; Tackney C; Hicklin D; Tamkins T; Goldstein N; Waksal H
CORPORATE AFFILIATE: ImClone-Syst.
CORPORATE SOURCE: Department of Molecular Biology, ImClone Systems Incorporated, 180 Varick Street, NY 10014, USA.
JOURNAL: J.Biotechnol. (34, 1, 79-86) 1994
CODEN: JBITD4
LANGUAGE: English
ABSTRACT: Human recombinant %interleukin%-6 (rIL6) muteins (%delta% -22Cys1,2-IL6 and delta-22Cys3,4-IL6) lacking the first 22 N-terminal amino acids of the native IL6 and lacking one or other of the 2 pairs of cysteines at either position 45 and 51 or position 74 and 84 were constructed. Cysteine-free IL6 DNA was synthesized and the Ser residues at positions 45 and 51 or 74 and 84 were replaced by Cys. The constructs were cloned into vector plasmid pKK233-2 under the control of the P-trc IPTG-inducible promoter and expressed in Escherichia coli. There was a dramatic increase in the level of rIL6 produced from each mutein clone, compared to the level produced by the wild-type IL6 clone. The yield of soluble and properly refolded mutein IL6 was highest when the Cys residues at position 74 and 84 were left intact (delta-22Cys1,2-IL6). Delta-22Cys1,2-IL6 was as active as wild-type IL6 and a lower concentration of the mutein IL6 was required to reach maximal activity, compared to the wild-type IL6. Mutein delta-22Cys3,4-IL6 had a much reduced biological activity. (21 ref)

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$9.30 3 Types
$11.57 Estimated cost File73
$2.26 0.101 DialUnits File357
$35.64 9 Type(s) in Format 7
$35.64 9 Types
$37.90 Estimated cost File357
OneSearch, 6 files, 1.670 DialUnits FileOS
$0.26 TELNET
$240.95 Estimated cost this search
$243.96 Estimated total session cost 2.661 DialUnits
Logoff: level 05.10.03 D 08:09:53

Connection closed by remote host